



88045609



U.S. Department of the Interior
Bureau of Land Management
Prineville District

Draft

October, 1993

Oregon State Parks and Recreation Department



John Day River Management Plan and Environmental Impact Statement



for

**BLM Wild and Scenic River Segments,
related BLM-administered lands and
State Scenic Waterways Segments**

GB
1225
.06
P75
1993
c.2

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/PL-93/51+1792

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

88045609

63
1225
.06
175
1993
c.2

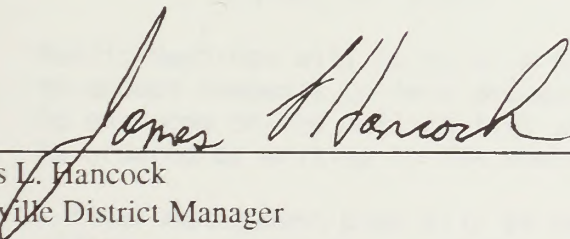
DRAFT
John Day River
Management Plan
and
Environmental Impact Statement

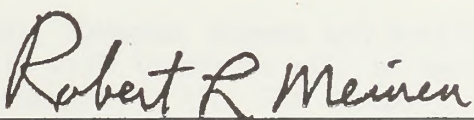
October, 1993

Prepared by

U.S. Department of Interior
Bureau of Land Management
Prineville District

Oregon State Parks and Recreation Department


James L. Hancock
Prineville District Manager


Robert L. Meinen
Director

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office
P.O. Box 550 (185 E. 4th Street)
Prineville, Oregon 97754

Dear Reader:

The John Day River System Draft Management Plan and Environmental Impact Statement is presented for your review and comment. This document outlines management options and environmental consequences for managing lands administered by the BLM along the John Day River system. It also proposes classification and rules affecting all lands, including private lands, within the designated State Scenic Waterways.

Release of this document initiates a 90-day Federal review and comment period. Written comments will be accepted through January 18, 1994. Comments on the BLM portion of this plan should be sent to:

Area Manager, Central Oregon Resource Area
Box 550
Prineville, OR 97754

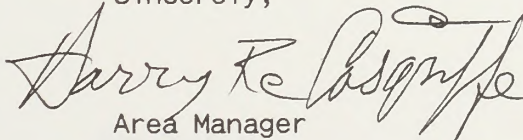
Release of this document initiates a 70-day State review and comment period. The State Parks and Recreation Department has notified the Oregon Secretary of State that the Parks Commission will be considering the adoption of the proposed management program at their January 1994 meeting. Written comments on the State Scenic Waterways proposals will be accepted through December 29, 1993. Comments on the State Scenic Waterways portion of the plan (Chapter (V)) should be sent to:

Gary Miniszewski, Recreation Resource Planner
Oregon State Parks and Recreation Department
525 Trade Street SE
Salem, OR 97310

Public meetings will be held in Fossil, John Day, Redmond, Eugene and Portland to accept comments on this document. A schedule with locations will be mailed to everyone on the mailing list and to anyone requesting it. The schedule can be ordered by writing to the above addresses or by calling (503) 447-4115.

A final management plan will be prepared incorporating any revisions, additions, or deletions which may be necessary as a result of public comments.

Sincerely,


Area Manager

EXECUTIVE SUMMARY

Major management responsibilities for the John Day River and its Tributaries are shared by the Bureau of Land Management (BLM), the Oregon State Parks and Recreation Department (OPRD) and the U.S. Forest Service (USFS). Other federal and state agencies have lesser, but still important specific responsibilities. The USFS is developing separate management plans for river segments which fall under their jurisdiction, and these plans are only referred to in this document. The OPRD is recommending management guidelines for the segments of the John Day which have been designated State Scenic Waterways, and these guidelines are covered in Chapter 5. The remainder of this plan is BLM's proposal for management of the river segments which have been designated as Wild and Scenic by the Congress and related lands which are under BLM jurisdiction.

Five alternatives for cooperative management of the natural and recreational resources of the John Day River System have been developed and analyzed in accordance with state and federal requirements.

The alternatives respond to 23 major issues and concerns identified in the planning process by the citizen ad hoc committee, the general public through meetings and staff members of the managing agencies. These issues and concerns fall into three categories:

- 1) Protection and enhancement of resource values,
- 2) Types and levels of recreational use and
- 3) Public services.

Except for the No Action Alternative, these alternatives present reasonable options for managing the resources of the John Day River System so as to provide a wide range of compatible outdoor recreation opportunities while minimizing user conflicts. These opportunities would be provided to the extent that they do not impair the natural beauty of the river environment, diminish its fish and wildlife, scientific and recreational values and that they take into account the rights and interests of private landowners.

The Preferred Alternative is a combination of proposed management actions selected from the other four alternatives. The management objectives under this alternative would be to protect the solitude and scenic beauty of two river segments by controlling recreation uses to a low level, to allow moderate increases in recreation uses on two river segments and provide for more uses on four river segments. Natural resource conditions would improve on the two low-use-level segments, remain about the same as now on the two moderate-use-level segments and, with proper design and maintenance of facilities, impacts to natural resources would be controlled in the four "more use" segments.

Table 1: Summary of Overall Impacts to All Resources by Alternative**Alternatives**

(Preferred)

Managing:	A	B	C	D	E
Soil	-M	NC	+L	+H	+L
Water	-M	NC	+L	+L	+L
Vegetation	-M	+L	+M	+H	+M
Fish and Wildlife	-M	+L	+M	+H	+M
Cultural Values	-M	-L	-L	NC	-L
Threatened and Endangered Species	-H	-M	-L	NC	-L
Scenery	-M	-L	-L	+L	-L
Overall Recreation Use (Quantity)	+H	+M	+L	L	+L
Overall Recreation Use (Quality)	-H	-M	-L	+L	-L
Access	NC	+M	+L	NC	+L
Economic Values	+H	+M	+L	L	+L
Law Enforcement & Emergency Services	-H	-M	-L	NC	-L
Fire	-H	-M	NC	+L	NC
Public Safety	-M	-L	NC	+L	NC
Private Land & Property Rights	-M	NC	NC	NC	NC

+ Beneficial H High
 - Adverse M Moderate
 NC No Change L Low

Environmental Consequences

Air: None of the alternatives would significantly affect air quality.

Soil: Over the long term, soil stability would be adversely affected by Alternative A, maintained at present levels by Alternative B, slightly improved by Alternatives C and E, and substantially improved by Alternative D.

Water: Water quality would be slightly degraded under Alternative A, remain the same under Alternative B and be slightly improved under Alternatives C, D and E.

Vegetation: Long-range improvements would be expected in vegetative condition under all alternatives except Alternative A where there would be a decline in condition.

Fish and Wildlife: Habitats and populations would benefit under all alternatives except Alternative A, where adverse effects would be expected.

Cultural Values: Impacts to these resources would be adverse in Alternative A and could be similar in Alternatives B, C and E without a positive program of information, education and law enforcement. Under Alternative D, impacts to cultural resources would be low.

Threatened and Endangered Species: Alternatives A and B probably would adversely affect these plants and animals. Under Alternative C there could be adverse impacts without proper education and information. Alternative D would result in little or no impact on these resources.

Scenery: In the long-term, scenery would suffer under Alternative A, be slightly degraded due to the necessity of man-made control facilities in Alternatives B, C and E, and improve under Alternative D.

Overall Recreation Use (Quantity): Use levels would gain in Alternatives A and B, remain about the same in Alternatives C and E, and probably would drop in Alternative D.

Overall Recreation Use (Quality): The quality of recreation experiences would be adversely affected by Alternatives A and B, remain about the same with Alternatives C and E, and improve under Alternative D.

Access: Under Alternatives A and D, access would not change. Under Alternatives B, C and E, access would be improved.

Economic Values: Substantial economic benefits would be realized in local communities under Alternatives A and B. Benefits probably would rise slightly under Alternatives C and E, and probably would fall slightly under Alternative D.

Law Enforcement and Emergency Services: Alternatives A and B would adversely affect these services, while Alternatives C and E would result in a slight negative impact. No change would be expected in the long run with Alternative D, except for the need to control boater numbers.

Fire: Fire management would be adversely affected by Alternatives A and B. No change would be expected under Alternatives C and E. Alternative D would be expected to result in a slight positive impact to fire management.

Public Safety: Alternatives A and B would be expected to affect public safety adversely. No change would be expected under Alternatives C and E. Concerns for public safety would be least under Alternative D.

Private Land and Property Rights: Alternative A would be expected to have an adverse effect on these rights. Under Alternatives B, C, D and E less conflict and fewer trespasses would be expected.

Segment	Alternative A Existing Use and Development	Alternative B More Use and Development
1: Tumwater Falls to Cottonwood Bridge	<p>This alternative would continue the existing management situation. This means that use, especially boating use, would continue to rapidly increase with motorized boating showing the most rapid growth. No public boating facilities exist below Cottonwood Bridge. Float boaters exit the river at McDonald, often on private land without permission. Motorized boaters either enter the river at Cottonwood Bridge and exit the river at Cottonwood Bridge or on private land at McDonald. The only public facility in this segment is an Oregon Trail Ramada with interpretive signs at McDonald on the west side of the river.</p> <p>This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.</p>	<p>This alternative would propose to acquire private land from a willing seller at McDonald and create visitor facilities there. Proposed facilities include a day use picnic area, campground, boat launch capable of accommodating motorized boats, and signs interpreting the Oregon Trail Crossing.</p> <p>BLM would improve the BLM portion of Hay Creek Road and attempt to acquire the remaining portion of the road allowing public vehicle access to the river.</p> <p>Signs providing visitor information would be installed at McDonald and Hay Creek Road.</p> <p>Boating use would not be limited. This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.</p>
2: Cottonwood Bridge to Butte Creek	<p>This alternative would continue the existing management situation. Boating use would continue to rapidly increase and no facilities would be provided. Almost all existing use now is boating trips which include two or more nights of camping. BLM would continue river patrols which include litter removal. Popular campsites would receive increasing use.</p> <p>Motorized boating would continue to be prohibited by OMB between May 1 and October 1.</p>	<p>This alternative would accommodate the highest reasonable use levels for this segment. BLM would seek new public vehicle access to the river in six locations and numbers of boaters would be limited only by the number of available campsites. BLM would also seek to construct a minimum facility recreation site, to include camping, at the mouth of Butte Creek, and provide public information bulletin boards at all newly acquired public vehicle access sites.</p> <p>This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.</p>

Alternative C Moderate Use and Development	Alternative D Low Use and Development	Alternative E Preferred
<p>This alternative would propose to acquire private land from a willing seller at McDonald to construct a day use area on the east river bank.</p> <p>The BLM portion of Hay Creek Road would be improved and a trailhead and parking area constructed at the end of the BLM segment. A trail to the river on BLM land would be constructed from that point.</p> <p>Boating use numbers would be collected during the next two years and boating would be limited to 50% more than average annual use during the two year period.</p> <p>This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.</p>	<p>This alternative would seek to keep use at present low levels by providing no additional facilities and limiting boating use. Boating use numbers would be collected during the next two years. After this data is collected, boating use would be limited to the average annual use during the two year period.</p> <p>BLM would seek to prohibit motorized boating in this segment.</p>	<p>Alternative C is the BLM preferred alternative for this segment, except that no action would be taken on Hay Creek Road and no limits on numbers of boaters would be imposed.</p>
<p>This alternative proposes to seek public vehicle access to the river at two new locations. Public informational bulletin boards would be provided at these new access points. No other facilities would be provided.</p> <p>Boating use would be allowed to increase to a level where 75 percent of available campsites are occupied each night.</p>	<p>This alternative would seek to manage for the lowest reasonable use levels. No additional public vehicle access or facilities would be provided by BLM. Access to this segment would be by boat launched at Clarno or above.</p> <p>Boating use would be limited to where boaters occupy 50 percent of available campsites during peak periods and 20 percent during non-peak periods between April 1 and October 1. All boating would be prohibited between November 1 and March 1.</p> <p>BLM would seek to prohibit motorized boating.</p>	<p>Alternative D is the agency preferred alternative.</p>

Segment	Alternative A Existing Use and Development	Alternative B More Use and Development
3: Butte Creek to Service Creek	<p>This alternative would continue the existing management situation. Boating use would continue to increase and no facilities would be provided. Boating use now includes both day trips and overnight trips involving several days.</p> <p>Popular campsites would receive increasing use.</p> <p>BLM would maintain river campsites including dispersed camping sites at Burnt Ranch Rapids and Priest Hole. BLM would complete construction of the Service Creek Recreation site as planned.</p> <p>The May 1 to October 1 motorized boating closure would continue from Butte Creek to Clarno bridge. Year-round motorized boating would be allowed on the remainder of this segment.</p>	<p>This alternative would accommodate the highest reasonable use loads for this segment. BLM would seek new public vehicle access on Juniper Island Road and Butte Creek Road. BLM would also seek to acquire a public river access site near Twickenham. This site would contain only toilets, parking, public information and boat launch.</p> <p>Public recreation sites would be developed at Priest Hole, one site above Burnt Ranch Rapids, one site below Burnt Ranch Rapids (to allow boaters to avoid the rapids) and day use facilities at Clarno Homestead.</p> <p>The number of overnight boaters would be limited by the maximum number of available campsites. Day use boaters would not be limited. The May 1 to October 1 motorized boating closure would continue from Butte Creek to Clarno bridge. Year-round motorized boating would be allowed on the remainder of the segment.</p>
4: Service Creek to Dayville	<p>This alternative would continue existing management. Existing facilities would be maintained, no new access would be provided, and boating use would continue to increase.</p>	<p>This alternative would accommodate the highest reasonable use levels for this segment. A boat launch and day use facilities would be provided at the recreation site at Mile Post (MP) 99 between Spray and Kimberly. Public information and education efforts would be expanded, including installation of signs at Muleshoe and MP 99 recreation sites.</p> <p>Float boating and motorized boating use would not be limited.</p>
5: Dayville to Headwaters	This segment is almost entirely privately owned agricultural land and BLM is not proposing management actions.	
6: North Fork Kimberly to Monument	<p>This alternative would continue existing management. Existing facilities would be maintained, no new access would be provided and boating use would continue to increase.</p>	<p>This alternative would accommodate the highest reasonable use of the river and associated BLM- administered lands. The two existing recreation sites would be improved and expanded. Public information and interpretation would also be greatly expanded.</p> <p>Boating use, including motorized boating, would not be limited.</p>

Alternative C Moderate Use and Development	Alternative D Low Use and Development	Alternative E Preferred
<p>This alternative would accommodate slightly higher use than presently exists. BLM would seek new public vehicle access on Juniper Island Road or Butte Creek Road. A minimum facility recreation site would be provided just above Burnt Ranch Rapids. A boat launch and camping facilities would be provided at Priest Hole, and a boat launch with parking and day use facilities would be provided at Twickenham if a suitable site could be acquired from a willing seller.</p> <p>The number of overnight boaters would be limited to where 75 percent of available campsites were occupied at night. BLM would gather use data for two years. Day use boaters would be limited to 75 percent more than the day use level determined by that effort. Motorized boating would continue to be prohibited by OMB from Butte Creek to Clarno Bridge from May 1 to October 1. BLM would seek to continue this closure for the entire segment.</p>	<p>This alternative would seek to keep use at the presently low levels by limiting boating use and providing no additional river access or facilities.</p> <p>Numbers of overnight boaters would be limited to where boaters occupy 50 percent of available campsites during peak periods and 20 percent during non-peak periods. BLM would gather boater use data for two years. Day use boaters would be limited to 50 percent more than the numbers determined in the two year effort during peak periods and 20 percent during non-peak periods.</p> <p>BLM would seek to prohibit motorized boating in this segment.</p>	<p>Alternative C is the agency preferred alternative.</p>
<p>This alternative would not expand public access or facilities. Public information and education would be expanded but roadside signing would be limited to the recreation sites at Muleshoe and MP 99. BLM would collect boating use information for two years. Boating use would then be limited to 75 percent more than the use level determined from the two year collection effort.</p> <p>BLM would seek to prohibit motorized boating from April 1 to October 1.</p>	<p>BLM would not expand public access, facilities or public information. However, State Highways are located next to or near the river for this entire segment, making maintenance of low use levels unrealistic.</p> <p>BLM would collect boating use information for two years. Boating use would then be limited to 50 percent more than the use level determined from the two year collection effort.</p> <p>BLM would seek to prohibit motorized boating in this segment.</p>	<p>Alternative B is the agency preferred alternative.</p>
<p>Two recreation sites would be improved and expanded. Public information and interpretation signs would be placed at three recreation sites.</p> <p>BLM would collect boating use data for two years. Boating use would then be limited to 75 percent more than the use level determined by the two year collection effort.</p> <p>BLM would seek to prohibit motorized boating from April 1 to October 1.</p>	<p>Existing facilities would be maintained but not expanded. Public information signs would be provided.</p> <p>BLM would collect boating use data for two years. Boating use would then be limited to 50 percent more than the use level determined from the two year collection effort.</p> <p>BLM would seek to prohibit motorized boating.</p>	<p>Alternative B is the preferred alternative, except that no limit on numbers of boaters would be imposed. BLM would seek to prohibit motorized boating.</p>

Segment	Alternative A Existing Use and Development	Alternative B More Use and Development
7: North Fork Monument to Dale	This alternative would continue existing management. No facilities or public information would be provided. Public river access would continue to be well provided by the primitive road which follows this entire segment. Boating use would continue to rapidly increase without limits and motorized boating would continue to be allowed.	BLM would not limit boating use, support or provide a public river access site near Dale, or substantially increase public information about the area. Boating use, including motorized boating, would not be limited.
8: North Fork Dale to Headwaters	This is a designated Wild and Scenic segment under the jurisdiction of USFS. BLM is not proposing management actions.	
9: Middle Fork from junction with North Fork to Headwaters.	This segment is partly under the jurisdiction of the USFS and partly privately-owned agricultural land, and BLM is not proposing management actions.	
10: South Fork from junction with Main Stem to County Road 67	This alternative would continue existing management. Public river access would not be improved or expanded. Existing public information signs would be maintained but no new public facilities would be provided.	This alternative would seek BLM acquisition of two key tracts of private land along the river, provide traffic control in riparian areas, widen and improve the surface of the South Fork Road, and provide large campgrounds at the sites where acquisition is proposed. Public information and education would be greatly expanded.
11: South Fork from County Road 67 to Headwaters	This alternative would continue existing management. BLM has minimal public land on this segment and therefore few opportunities to influence use. No facilities are provided and public river access is very limited. A public highway and gravel road are located next to or near this entire segment.	No additional public river access or lands would be acquired. Public information and education signs would be placed along the roads following this segment. A pullout interpretive kiosk would be installed on a BLM tract along the highway.

Alternative C Moderate Use and Development	Alternative D Low Use and Development	Alternative E Preferred
<p>BLM would support or provide a public river access site near Dale and provide minimum necessary public information signs in the area. Boating use would be limited to 75 percent of available campsites occupied each night. Motorized boating would be included in the 75 percent limit described above. No other motorized boating limits would be imposed.</p>	<p>BLM would support or provide a public river access site near Dale and provide minimum necessary public information signs in the area. Boating use would be limited to 50 percent of available campsites occupied each night.</p> <p>BLM would seek to prohibit motorized boating.</p>	<p>Alternative D is the preferred alternative.</p>
<p>BLM would seek acquisition of two key tracts of private land along the river, provide traffic control in riparian areas, improve the surface of the South Fork Road, and provide minimal public facilities at the properties proposed for acquisition. Public information and education facilities would be limited to signs and kiosks along the road.</p>	<p>This alternative would limit use by closing 20 percent of existing dispersed camping sites on the river. No land acquisitions would be pursued and no facilities provided. Public information would be limited to signs along the South Fork Road.</p>	<p>Alternative C is the preferred alternative.</p>
<p>This alternative is the same as Alternative B, except the kiosks would not be installed.</p>	<p>This alternative is the same as Alternative A.</p>	<p>Alternative C is the BLM preferred alternative.</p>

Table 2: Issues and Concerns

Issue or Concern	Where Discussed		
	IIID*	IIIE*	IVA*
A. Protection and Enhancement of Resource Values			
1. Wild and Scenic River Boundaries	X		
2. Scenic Quality			X
3. Fire Management			X
4. Weed Control			X
5. Fish Habitat		X	
6. Wildlife Habitat		X	X
7. Water Quality and Quantity		X	X
8. Riparian Vegetation		X	X
9. Cultural Resources		X	X
10. Paleontological Resources		X	X
B. Types and Levels of Recreational Use			
1. Boating Use Limits	X		
2. Boating Use Allocation	X		X
3. Motorized Boating	X		X
4. Non-Motorized Boating			X
5. Guided and Outfitted Services	X		X
6. Public Access	X		X
7. Camping			X
8. Fishing and Hunting		X	
C. Public Services			
1. Visitor Facilities	X		
2. Information and Education	X		
3. Emergency Services			X
4. Law Enforcement			X
5. Trespass			X
6. Utility Corridors		X	X

* IIID = Issues Addressed by This Plan

* IIIE = Issues Addressed by Other Plans

* IVA = Management Common To All Alternatives and Segments

State Scenic Waterways

Chapter 5 of this plan describes the State Scenic Waterways Program and recommends management guidelines for the segments of the John Day River designated as State Scenic Waterways. When Scenic Waterways were initiated in 1970, the lower John Day from Tumwater Falls to Service Creek was included in the program and management guidelines for that part of the river were developed. In 1988 another segment of the mainstem and the North, Middle, and South Forks also were designated as State Scenic Waterways.

The existing management guidelines for the lower river are now being revised and management guideline proposals for those segments and the newly added river segments are in Chapter 5. The management guidelines are developed through the classification of given river segments and application of specific land management rules appropriate for those segments.

Table of Contents

Executive Summary	i
I. Introduction	1
A. Background	1
B. Purpose and Need	6
C. Plan Scope and Organization	8
D. Planning Process and Public Involvement	10
E. Government Agencies and Organizations	10
F. Related Plans and Programs	20
II. River System Environment	25
A. Overview	25
B. Resource Values	42
C. Resource Uses	58
III. Issues, Alternatives and Existing Guidance	69
A. Goal Statement	69
B. Issues and Concerns	69
C. Management Alternatives	69
D. Issues Addressed by this Plan	71
E. Issues Addressed by Other Plans	79
IV. Alternatives, Actions and Environmental Consequences	87
A. Management Common to all Alternatives	87
B. River Segment Locations	100
C. Mainstem Segments	102
D. North Fork Segments	177
E. Middle Fork Segment	206
F. South Fork Segments	212
G. Cumulative Environmental Consequences	235
V. Oregon Scenic Waterways Program and its Application to the John Day River	241
Background	241
Administration	241
The Management Planning Process	243
Proposed Scenic Waterway Program for the John Day River, Mainstem	245
Proposed Scenic Waterway Program for the John Day River, North Fork	248
Proposed Scenic Waterway Program for the John Day River, Middle Fork	252
Proposed Scenic Waterway Program for the John Day River, South Fork	255

VI. Implementation.....	259
BLM and ORPD Responsibilities and Priorities	259
Cost Estimates	261
Appendices	265
A. Planning Participants	265
B. Glossary	267
C. List of Preparers.....	273
D. References	275
E. Acronyms	279

List of Tables

1 Summary of Overall Impacts to All Resources by Alternative	ii
2 Issues and Concerns	x
3 Comparison of the Federal and State Programs for Wild and Scenic Rivers	7
4 Aquatic and Riparian Habitat Management Programs - John Day River System	22
5 Related Plans and Programs	24
6 Types and Miles of Road near John Day River and Major Tributaries	30
7 Land Ownership Mainstem John Day, Dayville to Tumwater Falls	31
8 Land Ownership North Fork John Day USFS Boundary near Dale to Kimberly	31
9 Land Ownership Middle Fork John Day Highway 395 to Confluence with North Fork	31
10 Land Ownership South Fork John Day USFS Boundary to Confluence with Mainstem.....	31
11 Classification of National Wild and Scenic Rivers, John Day River System.....	32
12 Classification of State Scenic Waterways, John Day River System	34
13 City and County Populations, John Day Basin, 1980, 1985, 1990	36
14 Changes in Population, John Day Basin, 1980-1990	37
15 Average Resident Labor Force, John Day Basin Employment and Unemployment, 1988 and 1990	38
16 Average Resident Labor Force, Gilliam County Employment and Unemployment, 1988 and 1990	38
17 Average Resident Labor Force, Grant County Employment and Unemployment, 1988 and 1990	38
18 Average Resident Labor Force, Jefferson County Employment and Unemployment, 1988 and 1990	39
19 Average Resident Labor Force, Sherman County Employment and Unemployment, 1988 and 1990	39
20 Average Resident Labor Force, Wheeler County Employment and Unemployment, 1988 and 1990	39
21 Average Resident Labor Force, Wasco County Employment and Unemployment, 1988 and 1990	40
22 Travel Expenditures in John Day Basin Counties.....	41

23	Travel Impacts in John Day Basin Counties	41
24	Per Capita Income (by County) in the John Day Basin, 1991	42
25	Gross Farm and Ranch Production Sales/1990 (by County) in the John Day Basin.....	43
26	Outstandingly Remarkable and Significant Values of the John Day Wild and Scenic River System	44
27	Fish Species Found in the John Day River System	50
28	Summary of Threatened and Endangered and Candidate Wildlife Species, John Day River Basin.....	52
29	Vehicle Counts on Lower John Day River, 1992-93	62
30	Types of Watercraft on John Day River by Month and Year, 1984, 1988-92	64
31	Origin of Steelhead Anglers, John Day River, November through March, 1987-88 (ODFW)	65
32	Summary of Existing Water Rights for the John Day Basin by CFS and Beneficial Use	68
33	Issues and Concerns Discussed in the Plan	70
34	Problems of Water Quality and Quantity, John Day River Basin	82
35	Resource Value Ratings, John Day River, Segment 1	105
36	Grazing Allotments in Segment 1	110
37	Grazing Allotments in Segment 2	129
38	Grazing Allotments in Segment 3	148
39	Grazing Allotments in Segment 4	166
40	Grazing Allotments in Segment 7	191
41	Resource Value Ratings, South Fork John Day River.....	217
42	Grazing Allotments in Segment 10	221
43	Grazing Allotments in Segment 11	233
44	Estimated Costs for Construction and Land Acquisitions by Alternative	262
45	Estimated Development Costs for Camping and Day Use Areas by Alternative	263

List of Maps

1	LocationMap	2
2	Major Boat and Vehicle Access Points	28
3	Land Use	59
4	Existing and Proposed Pipelines and Powerlines	67
5	(Omitted during plan review)	
6	River Segments and Segment Map Index	101
7a	Segments 1 and 2	103, 122
7b	Segment 2	123
7c	Segments 2-3.....	124, 140
7d	Segment 3	141
7e	Segment 3-4	142
7f	Segments 4-5-6-7-8-9	161
7g	Segment 10	213
7h	Segment 11	214, 230
8	State Scenic Waterways	242

I. Introduction

A. Background

Location

The John Day River System includes the mainstem and the North, Middle and South Forks. This system contains over five hundred river miles and is one of the longest free-flowing river systems in the United States. The system drains a large portion of the northeast quadrant of Oregon (Map 1).

The North and Middle Forks flow from the Blue Mountains and the South Fork from the Ochoco Mountains. The mainstem begins in the Strawberry Mountains of eastern Oregon and flows west through John Day to Dayville where it is joined by the South Fork. Soon after Dayville, the river turns sharply north, flowing to Kimberly, where it is joined by the North Fork. From Kimberly, the river again turns west flowing for another 40 miles before it makes its final turn north to the Columbia River. The Middle Fork flows into the North Fork above Monument, about 20 miles upstream from the North Fork's confluence with the mainstem.

River History

Human use of the John Day River Basin spans at least 10,000 years. Prehistoric peoples found sheltered areas with dependable water for their temporary occupations in the basin. Resident fish, shellfish and runs of anadromous fish provided ready food sources, especially during late spring and early summer. Food, water and shelter attracted many animals which in turn provided meat and furs for hunters. Riparian vegetation provided food and materials for baskets, tools, clothing and houses. The intensity of prehistoric use undoubtedly varied over time based on environmental factors, human population levels and technology and the culture of different human groups who used the river canyon.

Historic use of the John Day River began in the early nineteenth century with fur trapping expeditions. In fact, the river is named for an early fur trapper. Beginning in the 1840s, emigrants bound for the Willamette Valley crossed the John Day River. In the 1860s, the search for gold drew increasing numbers of non-Indians into central and eastern Oregon.

Conflicts between the native populations and the newcomers led to military actions against the Indians and their relocation to reservations. Homesteads and ranches were established on the river corridor where fertile bottom lands could be farmed and water was available for irrigation and livestock.

Small communities eventually were established along the river to provide goods and services for mines, homesteads and ranches. The road network was expanded and improved as the population increased and agriculture, and eventually timber harvesting, became important sources of income in the area.

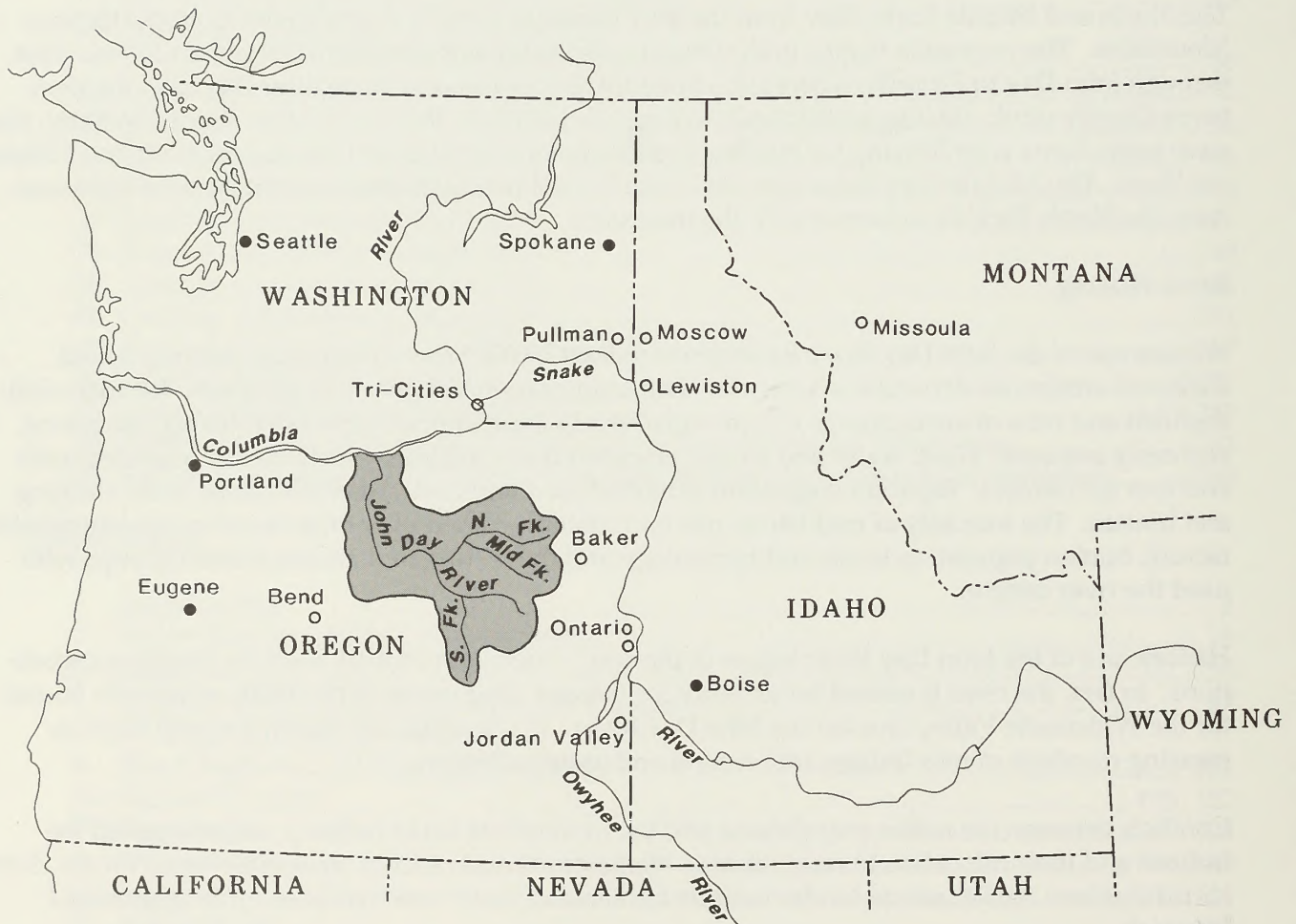
MAP 1

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management




Location Map

Prineville District

1993



LEGEND

-  John Day River Basin
-  Cities Over 75,000
-  Cities Under 75,000

The latter half of the twentieth century has seen a great increase in the use of the John Day River for leisure activities. Hunting, fishing, boating, camping, wildlife observation, photography, hiking, swimming and scenic viewing are among the most common recreational activities.

Legislative History

- 1933 The State of Oregon established the John Day River Wildlife Refuge from Thirtymile Creek to the Columbia River. The refuge includes a one-quarter mile corridor on each side of the river measured from the highwater mark. The primary purpose is to protect wintering and nesting waterfowl. No waterfowl hunting is allowed in this area.
- 1968 The National Wild and Scenic Rivers Act was passed by Congress (Public Law 90- 524; 16 U.S.C. 1271 et seq.) The John Day River System was not included in this original act but was added to the Wild and Scenic River System in 1988 by the Oregon Omnibus Wild and Scenic River Act.
- 1970 The Oregon State Scenic Waterways Act was established by a ballot initiative. This act designated the segment of the mainstem from Service Creek to Tumwater Falls (147 miles) a State Scenic Waterway.
- 1974 The amended Wild and Scenic Rivers Act was passed by Congress. This act further defined how Wild and Scenic Rivers should be managed and studied.
- 1979 The Mainstem John Day from Service Creek to Tumwater Falls was studied by the National Park Service for inclusion into the National Wild and Scenic Rivers System. The study concluded that the river qualified for designation and was sent to the Governor of Oregon for consideration. No further federal action was taken until 1988.
- 1980 Under the authority of the Federal Land Policy and Management Act of 1976 (FLPMA), the Bureau of Land Management (BLM) identified five Wilderness Study Areas (WSAs) along the Lower John Day River Mainstem. The WSAs are managed to preserve their wilderness character while Congress decides whether or not they should be part of the National Wilderness Preservation System.
- 1985 The Oregon State Marine Board (OMB) closed the section of The John Day River from Clarno to Tumwater Falls (100 miles) to motorized boat use from May 1 to October 1.
- 1988 The Oregon Rivers Initiative (Ballot Measure #7) was passed. In this Act the 13 miles between Service Creek and Parrish Creek were added to the state system. This legislation also designated the following tributary segments as State Scenic Waterways:
 1. North Fork John Day River (47 miles) from Camas Creek at Highway 395 to River Mile (RM) 20.2 upstream from Monument.
 2. Middle Fork John Day River (22 miles) from Highway 395 to confluence with North Fork
 3. South Fork John Day River (29 miles) from Post-Paulina Highway to Section 24, T. 13 S., R. 26 E. (Smokey Creek)

1988 The Oregon Omnibus Wild and Scenic Rivers Act was passed by Congress (Public Law 100-750). This Act added the John Day River Mainstem from Service Creek to Tumwater Falls (147 miles), the South Fork of the John Day River from the Malheur National Forest boundary to Smokey Creek (47 miles) and the North Fork of the John Day River from its headwaters to Camas Creek (54 miles) to the National Wild and Scenic Rivers System.

National Wild and Scenic Rivers System

The National Wild and Scenic Rivers System was created by Congress in 1968 with the passage of the Wild and Scenic Rivers Act (PL90-542). Its purpose is to preserve certain rivers with outstanding natural, cultural or recreational features in a free-flowing condition for the enjoyment of present and future generations. As of December 1990, the national system had grown from eight to 123 rivers or sections of rivers representing 33 states.

Rivers may be designated by Congress (usually following a study by a federal agency) or by the Secretary of the Interior. Each river is administered by either a federal or state agency. The river designation may include the entire river, or only part of a river, and may include tributaries. For federally-administered rivers, the designated boundaries generally include a one-quarter mile corridor on each side of the river (or a maximum of 320 acres per river mile) to protect related natural, cultural and recreational values. In most cases not all land within the boundaries is publicly owned. In fact, where there is a federal administering agency, there are limitations on how much land the agency is allowed to acquire.

Designated Wild and Scenic Rivers are further classified as wild, scenic or recreational. The following definitions are found in the Wild and Scenic Rivers Act of 1968, (PL 90-542) as amended.

"Every wild, scenic or recreational river in its free flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the National Wild and Scenic Rivers System and, if included, shall be classified, designated and administered as one of the following:

- 1) Wild river areas - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- 2) Scenic river areas - Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- 3) Recreational river areas - Those rivers or sections of rivers that are readily accessible by road or railroad that may have some development along their shorelines and that may have undergone some impoundment or diversion in the past."

Rivers in the National System are often referred to as "wild and scenic rivers" without regard to their specific classification. While the above reference is acceptable when speaking in general terms about a designated river, the specific classification of a river is important because it directly affects how the river is managed and what activities are permissible on federally managed land. For

example, recreation facilities such as campgrounds and boat launches may be built in Wild and Scenic Rivers classified as "Recreational", but are not normally allowed in segments classified as "Wild".

The Wild and Scenic portions of the John Day Mainstem and South Fork have been classified as "recreational". However, the North Fork of the John Day Wild and Scenic River has been split into all three classifications.

Regardless of classification, each designated river is administered with the goal of protecting and enhancing the values which caused it to be designated.

The Federal Energy Regulatory Commission (FERC) is prohibited from licensing projects on or directly affecting Wild and Scenic Rivers. Other federal agencies cannot assist by loan, grant, license or otherwise in the construction of any water resources project (such as dams, water diversion, channelization and rip-rapping) that would have a direct and adverse effect on river values. However, designation does not affect existing water rights or existing jurisdiction of states and the United States over waters as determined by established principles of law.

Oregon State Scenic Waterways Program

Background

The Oregon State Scenic Waterways Act was established by a ballot initiative in 1970. The original Scenic Waterways System created by the act included six rivers totalling 496 miles (ORS 390.805 - 390.925). The mainstem of the John Day River from Service Creek to Tumwater Falls was included in this original designation (Map 8, Chapter IV).

Rivers can be added to the Scenic Waterway System through designation by the Governor or the legislature. Rivers also can be added to the Scenic Waterways System by the citizens of Oregon. Since passage of the original act, the state government has added five rivers, as well as Waldo Lake, to the system. In 1988, Oregon voters passed the Oregon Rivers Initiative (Ballot Measure #7), which added 573 river miles. There are now segments of 19 rivers (1148 miles) and one lake in the system.

Program Goals

The Scenic Waterways Program promotes cooperative protection and wise use of rivers in the system by all agencies (federal, state, and local), individual property owners and recreation users. The program goals are:

- to protect the free-flowing character of designated rivers for fish, wildlife and recreation. No dams, reservoirs, impoundments, or placer mining activities are allowed on scenic waterways.
- to protect and enhance scenic, aesthetic, natural, recreational, scientific and fish and wildlife values along scenic waterways. New development or changes of existing uses proposed within a scenic waterway are reviewed and approved before they may take place.

- to protect private property rights. The Act discourages unsightly structures or inappropriate development that could be a nuisance to neighboring landowners or even depreciate property values. It prohibits pollution and the disturbance of adjacent surface lands by placer mining. It also prohibits public use of private property without explicit consent of the landowner.
- to promote expansion of the Scenic Waterways System. The Act sets up a process for adding new rivers to the system and establishes criteria for candidate rivers.
- to encourage other local, state and federal agencies to act consistently with the goals of the program. The Oregon State Parks and Recreation Department (OPRD) reviews plans and decisions made by other agencies to ensure consistency with the Scenic Waterways Program.

Administration

The Scenic Waterways Program is administered by the Oregon Parks and Recreation Department (OPRD) under the authority of the Oregon State Parks and Recreation Commission (OPRC) (ORS 390.805 to ORS 390-925). Oregon Administrative Rules (OAR) (OAR 736-40-005 to 736-40-095) have been adopted to govern the program. In addition to the general rules governing the program, OAR specific to each river segment are developed through the management planning process.

Because many of the State Scenic Waterways either overlap or adjoin Federal Wild and Scenic River segments, the OPRD staff has developed cooperative arrangements with the U.S. Forest Service (USFS) and BLM staff to develop joint federal and state river management plans. Key differences between the federal and state river protection systems have to do with river segment classifications and boundary locations. A National Wild and Scenic River is divided into three federal classifications - Wild, Scenic, or Recreational. These categories are established by Congress prior to the development of management plans.

The Oregon Scenic Waterways Program involves the application of six different classifications to segments of the river after the river is designated through the planning process. The boundary locations and other differences between the state and federal programs are explained in the following chart (Table 3).

B. Purpose and Need

The primary purpose of this draft plan is to identify alternative methods of protecting and enhancing the resource values of the John Day River System. This system includes Federal Wild and Scenic River segments, State Scenic Waterways and undesignated river segments.

The Oregon Omnibus Wild and Scenic Rivers Act designated some segments of the John Day River System as Wild and Scenic and mandated the writing of a management plan for those segments. Oregon Administrative Rules require that management plans be developed for the State Scenic Waterways segments, including private land that lies within these segments.

Table 3: Comparison of the Federal and State Programs for Wild and Scenic Rivers

Federal	State
Boundary not to exceed average of 320 acres per river mile. May vary in distance from river.	Boundary 1/4 mile on either side of the scenic waterway (including the river).
Control of private lands limited to purchase of easements or by fee simple. No condemnation or fee acquisition when more than 50% of a segment is publicly owned.	Stricter control exercised over instream fill and removal activities. Condemnation authority available but rarely used.
Land activities on federal lands controlled by classification and management plan.	Some regulation of land use activities authorized through issuance of permits.
Potential exists for regulation of upstream federal uses.	Some control over new water rights both within and upstream of scenic waterway.
Some interest in stream flows for recreation, fish and wildlife.	Strong concern for preservation of stream flows for fish, wildlife and recreation.
Timber harvest highly restricted on federal lands on "Wild" classified sections; less so on "Scenic" and "Recreation" sections.	Timber harvest regulated.
New mining claims banned only in "Wild" sections.	Placer mining banned, but allows some kinds of recreation mining. Surface mining closely regulated.
No federal assistance or permits provided to new dam projects.	Licensing or approval of dams by State prohibited.
BLM, National Park Service, or U.S. Forest Service recognized as Lead agency depending on land ownership.	State Parks recognized as lead agency with responsibilities also assigned to State Lands and Water Resources departments, Oregon State Marine Board, and to local government.
Management plans must be completed and adopted by agency and reported to Congress in three years.	Management plans adopted as administrative rules with no legislative deadlines.

The Oregon Scenic Waterways Program is discussed in more detail in Chapter V.

Two existing BLM plans (John Day Resource Management Plan and the Two Rivers Resource Management Plan) call for a comprehensive management plan for the John Day River.

The recent rapid growth in boating and fishing also has pointed to the need for management direction. Managing this growth in recreation use so as to protect and enhance the resource values of the river will require cooperation and coordination between all agencies and private individuals. An important goal for this plan is the enhancement of those cooperative efforts.

Individuals now using the land and rivers in the John Day River System do so with few constraints. Because there is little or no control on recreational activities along the river, human impacts to the vegetation, soils and other resources, especially in the heavily used areas, are apparant. Increased incidences of trespass on private lands also are occurring as the numbers of users increase. Increased use is causing the social setting for recreationists using the river to change. Boaters in the recent past often were able to float some segments for days without seeing other people. Now there is competition for popular campsites and floating while surrounded by boaters occurs on heavy use days. Many recreationists seeking a primitive setting sometimes find crowded conditions at their favorite campsites.

Management direction will provide a level of resource protection, development and monitoring of public use consistent with the National Wild and Scenic Rivers Act of 1968 and the BLM management policy and guidelines for managing wilderness study areas. Specific actions designed to provide for recreational use and enjoyment, without causing undue degradation to the quality of the recreational experience or the natural environment, are set forth by this plan. A proposed sequence for implementing the management actions also is provided in Chapter VI of this plan.

C. Plan Scope and Organization

Scope

The John Day River System includes over 500 miles of free flowing river, making it one of the longest unimpounded river systems in the continental United States. The system includes the Mainstem, North Fork, Middle Fork and South Fork.

The John Day River System is managed by several different agencies and numerous private landowners with various goals and authorities. All agencies strive to coordinate management activities. However, because of the many agencies with differing goals, schedules and resources, planning has been fragmented. All agencies and several organizations and landowners have expressed a desire to better coordinate management actions for the river.

This plan provides a management direction for BLM administered lands on the John Day River System. It also is intended to provide a framework for coordinated river management for all agencies and organizations involved with the John Day River. This is the first management plan that looks at the entire river system. The plan attempts to describe all planning efforts in one document to encourage better coordination among agencies with respect to future management

decisions. This approach allows comparisons to be made so management decisions in various river segments can better complement one another. The federal part of this plan does not presume to provide management direction for private lands or lands managed by other agencies. The OPRD, through the State Scenic Waterways Program, does affect land use and land management practices on private land within State Scenic Waterways.

This plan divides the John Day River System into eleven segments. The segments are logical divisions of the river system based upon land uses, ownership, access and other factors.

This plan identifies the level of use and development desired for eight of the eleven river segments where BLM has land management responsibilities. The levels range from low use and development where primitive conditions would be preserved, to more use and development where use levels would be allowed to increase and facilities would be provided to accommodate many visitors. The existing management situation also is described for each of the three remaining river segments where BLM does not have management responsibility. These management situations are provided to allow the reader a complete picture of how the John Day River System is managed.

Organization

This plan is divided into six chapters:

Chapter I contains introductory and background information and explains how the plan was developed and organized and how it fits with other John Day River management efforts.

Chapter II describes the overall river system environment, including resource values and uses.

Chapter III describes the issues and management alternatives that guide the BLM in planning for the river system. The chapter also identifies and describes the issues and existing guidance covered by this plan and issues covered by other plans.

Chapter IV describes the location, resource values and resource uses for each of the eleven river segments. It presents five management alternatives for the eight BLM segments, including the preferred alternative. This chapter also describes the environmental consequences of each alternative for each of these eight segments as well as the cumulative environmental consequences for the entire river system.

Chapter V describes the Oregon Scenic Waterways Program and its relationship to the John Day River.

Chapter VI describes the implementation of the preferred alternative.

Chapter VII is the Appendix.

D. Planning Process and Public Involvement

The need for a plan to manage recreation use and related resources has been recognized by BLM for many years. The Prineville District BLM began preparing a John Day River Management Plan prior to its designation as a National Wild and Scenic River. A citizen ad hoc group was formed to assist in this effort. Public meetings were held to help identify the issues to be addressed in the plan. Segments of the John Day River were subsequently designated as Wild and Scenic. Work on the John Day River Management Plan continued, focusing on satisfying the requirements of Wild and Scenic River designation.

Public scoping efforts relating to these requirements began in July, 1991 to determine issues and alternatives for the planning effort. News releases and a BLM newsletter ("High Desert River News") announced the scoping period. Interested citizens were contacted by mail and public scoping meetings were held in Fossil, Prineville, Eugene, Portland, John Day, Crooked River Ranch and Redmond during the month of August. Personnel from the OPRD and other managing agencies took part in these meetings.

Final issues and alternatives to guide the management plan were developed from previous and new public scoping efforts and from input by BLM and other agency staffs. A second "High Desert River News" described these issues and alternatives and was mailed to interested people in April, 1992. Subsequent releases have kept readers informed as to the status of the plan and other items of river management interest.

This draft Management Plan and Environmental Impact Statement is presented for a 90-day public review and comment period. After that, the BLM will analyze and evaluate the public comments received, adjust the draft plan as necessary and prepare the final plan. The final plan will guide and direct management of the river until another plan is written to take its place. However, this plan can be amended as needed, with public involvement. It will be formally evaluated each year.

E. Government Agencies and Organizations

Introduction

There are many federal, state and local agencies and organizations with management responsibilities which affect the John Day River System. These agencies must communicate regularly and work together to assure coordinated and efficient management of the river system. John Day River planning is not the first cooperative planning and resource management effort in the John Day River Area. County and city plans have been developed under state guidelines in close consultation and coordination with federal agencies and the public since the late 1970s. Federal plans, such as the BLM's Prineville District Two Rivers Resource Management Plan (RMP) and the John Day RMP, have been developed with substantial interagency review. Special emphasis programs, such as wildfire control, historic preservation, noxious weed control and wildlife habitat enhancement are routinely coordinated among agencies, land owners and other affected groups.

Following is a list of federal, state, local and private agencies whose actions influence the John Day River System. A general description of how the agency influences the river also is provided.
September 5, 1993

Federal Agencies

Bureau of Land Management

The BLM, U.S. Department of Interior, has lead responsibility for development of this plan. The BLM is a multiple-use agency which is responsible for administering extensive amounts of federal land in the John Day River System. Management practices on BLM lands have a significant effect on water quality and quantity in the John Day River System. BLM also manages people using the BLM lands and the river. BLM has the authority to regulate activities on BLM lands including the kind and amount of public use.

The John Day River System is almost entirely within the boundaries of the BLM's Central Oregon Resource Area of the Prineville District.

U.S. Forest Service

The USFS, U.S. Department of Agriculture, manages the headwater areas of the mainstem and all three forks. The USFS land management practices have significant influence on water quality and quantity in the John Day River System. They also manage the riparian habitat on USFS-administered land for several miles of the mainstem and each of the three forks.

Portions of the John Day River System are located in the Malhuer, Ochoco, Umatilla and Wallowa-Whitman National Forests.

National Park Service

The NPS, U.S. Department of Interior, also plays an important role in management of the John Day River System. The NPS administers the John Day Fossil Beds National Monument. The Monument's administrative headquarters is based in the town of John Day while the field units are located in three separate units in the John Day Basin between Dayville and Clarno. The NPS role in John Day River management is important because they manage several miles of river frontage. Even more important is their role in attracting and educating visitors as to the fossil resources in the John Day River System. Many new visitors to the area are first attracted by the National Monument. After visiting the Monument components, visitors are aware of the river-related recreation attractions of the area.

Soil Conservation Service

The SCS, U.S. Department of Agriculture, promotes and coordinates soil conservation projects in the John Day River basin. Soil conservation in the basin plays a critical role in protecting water

quality and quantity. The basin suffers from rapid run-off problems which contribute to excessive erosion, sedimentation, poor riparian condition, high water temperatures and extreme high and low flows. The SCS will continue to play a key role in improving soil and vegetative condition throughout the basin, which will result in continued improvement in water quality and quantity.

Bureau of Indian Affairs

The BIA, U.S. Department of Interior, is the federal agency with primary responsibility for working with Tribal governments, including the Confederated Tribes of the Warm Springs Reservation and the Confederated Tribes of the Umatilla Reservation. The BIA is mandated to encourage and support Tribal efforts to govern themselves; also to provide needed programs and services on the reservations.

Fish and Wildlife Service

The USFWS, U.S. Department of Interior, administers the federal Endangered Species Act of 1973 (as amended). The BLM consults with USFWS to obtain a biological opinion on appropriate courses of action when a determination has been made that a threatened or endangered species, or a critical habitat may be affected by a proposed management action. A decision could mean the proposed action is modified or abandoned.

Bonneville Power Administration

The BPA markets electric power and energy from federal hydroelectric projects in the Pacific Northwest. In addition, BPA is responsible for energy conservation, renewable resource development and fish and wildlife enhancement under the provisions of the Pacific Northwest Electric Power Planning and Conservation Act of 1980.

Bureau of Mines

The BM is primarily a research and fact-finding agency. Its goal is to help ensure that the nation has adequate supplies of nonfuel minerals for security and other needs. Research is conducted to provide the technology for the extraction, processing, use and recycling of the nation's nonfuel mineral resources at a reasonable cost without harm to the environment or the workers involved.

Environmental Protection Agency

The purpose of the EPA is to protect and enhance our environment today and for future generations to the fullest extent possible under the laws enacted by Congress. EPA's mandate is to mount an integrated, coordinated attack on environmental pollution in cooperation with state and local governments.

Bureau of Reclamation

The original purpose of the bureau (BR) was to secure a year-round water supply for irrigation in the 17 western states. That mission was expanded to include domestic and industrial water, gen-

eration of hydroelectric power, provision of outdoor recreation opportunities, regulation of rivers, flood control and the enhancement and protection of fish and wildlife habitats.

Army Corps of Engineers

The CE manages the U.S. Army's real property and civil works programs related to rivers, harbors and waterways. The Corps also protects and preserves navigable waters and related resources such as wetlands.

Geological Survey

The USGS has the following primary responsibilities: identifying the nation's land, water, energy and mineral resources; classifying federal lands for mineral and energy resources and water power potential; investigating natural hazards and conducting the national mapping program. The USGS has been gaging stream flows since 1894.

Federal Energy Regulatory Commission

The FERC, a five-member commission within the Department of Energy, sets rates for the transportation and sale of natural gas and oil and for the transmission and sale of electricity. The FERC regulates the licensing of hydroelectric power projects.

National Marine Fisheries Service

The NMFS is part of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce. Under the Fishery Conservation and Management Act of 1976, NMFS conducts an integrated program of management, research and services related to the protection and rational use of living marine resources and their habitats. The BLM will consult with NMFS on concerns for anadromous fish in the John Day River System.

Northwest Power Planning Council

The NPPC was authorized by the Northwest Power Act of 1980. Four states (Idaho, Montana, Oregon, and Washington) make up the NPPC. The council consists of two persons from each state whose job is to: (1) develop a reliable and economical 20-year electrical power plan (2) protect and re-build fish and wildlife populations, and (3) involve the public in the decision-making process. The council works with a variety of local, state, and federal agencies, as well as with concerned environmental groups and individuals, to strike a balance between the needs for electrical power and the survival of fish and wildlife.

State and Local Agencies

Oregon State Parks and Recreation Department

One of the functions of the OPRD is to administer the State Scenic Waterways Program, which includes segments of the John Day River. The OPRD develops plans that classify scenic waterway

segments and administrative rules affecting land use and land management practices. OPRD is an important partner with the BLM in management of the John Day River System. This partnership is important because the State Scenic Waterways program, which mainly focuses on private land use and management practices, complements the Federal Wild and Scenic Rivers Program, which mainly focuses on the administration of federal lands.

In addition to operating State Parks, the department gives technical assistance to local government agencies on park and recreation matters, administers the trail and ocean shoreland programs, develops and maintains the Statewide Comprehensive Outdoor Recreation Plan (SCORP) and administers the Federal Land and Water Conservation Fund matching grant program. Also, the OPRD will be determining the best information available regarding instream water flow needs for recreational uses in scenic waterways. OPRD will be working in conjunction with the Oregon Department of Fish and Wildlife (ODFW) and the Department of Environmental Quality (DEQ) in applying for instream water rights with the Oregon Water Resources Commission (OWRC).

Oregon Department of Fish and Wildlife

The ODFW is responsible for the management and wise use of the state's fish and wildlife. The department is charged with maintaining optimum numbers of indigenous fish and wildlife and ensuring that no species is threatened with extinction. The Department is also responsible for developing and administering fish and wildlife regulations. The BLM and the ODFW have cooperative management agreements on the Murderers Creek Wildlife Management Area and on the South Fork Coordinated Planning Area. The ODFW manages ODFW-owned lands along the John Day River Mainstem and South Fork. The agency has undertaken an aggressive program to restore riparian habitat on department lands and has actively sought and encouraged other agencies and private landowners to follow their lead. The ODFW routinely monitors John Day River angling effort and harvest, as well as hunter effort and harvest.

The BLM and the ODFW have worked closely on site-specific activities to protect and enhance resources of interest to both agencies. The ODFW also works with the BLM in vegetation monitoring and evaluation, the installation of range and wildlife improvements and the reintroduction of native wildlife species. The ODFW has played an active advisory role in the development of the John Day River Plan.

Oregon State Marine Board

The Oregon State Marine Board (OMB) is the state's recreational boating agency. By law, all motor boats and all sailboats over twelve feet in length must be registered and titled by the Board. There are over 180,000 boats currently registered statewide. The Board also registers all fishing and hunting guides and outfitters operating in the state.

The Board has statutory and administrative rule-making authority to regulate and enforce recreational boating and equipment. The Board currently has a closure to motorized boating on the mainstem John Day between Tumwater Falls and the Highway 218 bridge at Clarno from May 1 to October 1 (OAR 250-30-030).

In addition, the use of personal watercraft (jet-skis, wet bikes, and the like) is prohibited above Tumwater Falls (OAR 250-21-040).

Marine law enforcement is provided by county sheriffs and the State Police (OSP). The Board contracts for statewide services with OSP and has contracts with Jefferson, Sherman, Umatilla and Wasco county sheriffs to provide marine law enforcement services in this area. Marine patrol officers conduct courtesy boat exams; place buoys, signs, and navigational markers; respond to emergency search and rescue calls; and conduct school water safety programs in addition to patrolling recreational waterways.

All recreational boating accidents involving an injury, fatality, or significant property damage are required by law to be reported to OMB. In reality, only a fraction of the actual accidents are reported. OMB statistics indicate that since 1980 a total of 10 accidents were reported on the John Day River. All but one of these occurred on the lower section near the Columbia River. In 1985, a canoe capsized four miles north of Monument, resulting in two fatalities.

The OMB education program offers a correspondence training course for boaters; provides information in a variety of formats relating to boating safety, operator courtesy, and other topics related to recreational boating; provides materials for school-based safety education programs; and assists in the design of informational signs.

OMB's facilities program provides grants-in-aid to cities, counties, park districts, and port districts for the construction of boating access facilities. Typical improvements include boat ramps, parking lots, boarding floats, and restrooms. Funding for the maintenance of public boating facilities is also provided by OMB for qualifying sites. OMB staff also provides technical design assistance to recipients of facilities grants.

State law prohibits the use of non-encapsulated polystyrene foam in state waters. The Board reviews and issues permits for all uses of foam flotation under this law. In addition, OMB administers an Adopt-a-River program authorized by state law in 1993.

Oregon Department of Environmental Quality

The DEQ regulates and guards against the deterioration of air and water quality in the state of Oregon. DEQ implements the Statewide Water Quality Management Plan. The plan establishes standards of water quality for each of the Oregon Water Resources Department's (OWRD) 18 river basins. Beneficial uses of rivers and streams that are protected by DEQ are:

- aesthetic quality
- public
- fishing and hunting
- water contact recreation
- livestock watering
- private
- boating
- salmonid rearing and spawning
- irrigation
- anadromous fish passage
- resident fish and aquatic life
- industrial water supplies
- wildlife

The standards for water quality are set to maintain the highest possible levels of dissolved oxygen and the lowest possible levels for temperature, bacteria, dissolved chemicals, and toxic materials. The DEQ anti-degradation policy states that high quality waters will be protected from degradation, unless the Environmental Quality Commission, based on economic or social needs, finds it necessary to make an exception. DEQ also sets standards and procedures for on-site sewage systems, issues permits for dredge and fill of wetlands, and maintains water quality monitoring stations throughout Oregon. Any person proposing an action with a potential impact to water quality or that would create wastes that would flow into public waters must first obtain a permit from DEQ.

Under a memorandum of understanding, the DEQ and federal agencies work together to meet implementation requirements of the Clean Water Act (P.L. 92-500), as amended. The Federal Fish and Wildlife Coordination Act of 1958 requires that wildlife conservation be given equal consideration and be coordinated with other features of water developments.

Oregon Department of Agriculture

The ODA cooperates with local soil and water conservation districts to establish mutual goals for coordinating range and watershed management practices and for gathering and sharing natural resources information proven beneficial for use on public and private lands. Cooperation with appropriate weed control districts also occurs to deal with infestations of noxious weeds.

The ODA has the authority to work towards long-term planning for agricultural resources. This authority allows the department to assure adequate water supplies for all phases of agricultural resources. The department is assisted by the Soil and Water Conservation Division, the Soil and Water Conservation Commission, and 45 Soil and Water Conservation Districts (one per county) around the state.

Oregon Department of Forestry

The ODF manages state-owned forests and enforces the Forest Practices Act. The Forest Practices Act protects water quality, soil, fish, and wildlife from adverse impacts from forest operations. The Forest Practices Act regulates reforestation, road construction and maintenance, harvesting, chemical application, and disposal of slash. An ODF notification is required for logging and other forest operations.

The Forest Practices Act does not address special requirements on non-federal lands within State Scenic Waterway corridors. The Act does, however, have rules to protect riparian management areas. Under these rules, a proposed commercial forest operation within the riparian management area of a Class 1 stream must be described in a written plan. The plan includes any operation within 100 feet of a Class 1 stream. The plan must describe how the operation will meet standards determined by the Forest Practices Act, and then be submitted to ODF for approval. In these sensitive areas, close coordination is required. ODF directive 6-1-0-002 outlines specific procedures for coordinating the Forest Practice Program and the Oregon Scenic Waterways Program for opera-

tions in a scenic waterway corridor. The goal of coordination is keeping all the parties informed of the responsibilities, requirements, and planned activities so that the process is efficient and effective.

The BLM has entered into a memorandum of understanding with the ODF to ensure minimum standards are met for timber harvest, reforestation of economically suitable lands, road construction, chemical application, slash disposal and maintenance of streamside buffers. Fire suppression activities on public lands are scheduled in cooperation with the ODF and adjacent landowners. Harvest techniques and silvicultural practices also are coordinated with ODF and private landowners.

Division of State Lands

Under state law, the DSL is responsible for the management of the beds and banks of navigable waterbodies (ORS 274,005-274,590). DSL is the administrative arm of the State Land Board (the Board), composed of the Governor, Secretary of State and State Treasurer. Under constitutional and statutory guidelines, the Board is responsible for managing the assets of the Common School Fund. These assets include the beds and banks of Oregon's navigable waterways and are to be managed for the greatest benefit of the people of this state under sound techniques of land management. Protection of public trust values of navigation, fish habitat and recreation are of paramount importance.

DSL is responsible for protecting and conserving the beds and banks of scenic waterways. Any alteration to the bed or banks of a scenic river requires approval by the Land Board and a permit issued by the DSL. DSL works closely with OPRD to ensure that any changes to the bed or banks of a scenic river are consistent with the State Scenic Waterway Management Plan.

The DSL also administers the state's Removal-Fill Law which protects Oregon's waterways from uncontrolled alteration. The law requires a permit for fill or removal of more than 50 cubic yards of material within state waterways. The permit review process involves coordination with the natural resource and land use agencies at the local, state and federal levels.

Oregon Department of Transportation

The ODOT is responsible for planning, designing, re-constructing, posting signs, maintenance of the state highways for public safety, and the management of motor vehicle use.

A memorandum of understanding, approved by the State Highway Engineer and Regional Forester for the Pacific Northwest Region, USFS, provides the basis for coordinating issues related to state highways through national forest lands. ODOT lacks special requirements for highways within State Scenic Waterways. However, ODOT must prepare a section 4(f) evaluation under the Federal Aid Highway Act of 1968 for any federally funded highway project which requires the use of any publicly owned land used as a recreation area beyond the existing highway improvement.

Oregon State Police

The OSP was created to serve as a rural patrol and to assist local law enforcement agencies. This agency was empowered to enforce all Oregon statutes without limitation by county or other political subdivision.

Oregon Water Resources Department

The OWRD is responsible for the management and distribution of the state's water resources. The Water Resources Commission (OWRC), a seven-member panel appointed by the Governor, develops policy for OWRD through the preparation of river basin plans for each of Oregon's 18 river basins. The Commission uses river basin plans to classify stream flow for domestic, municipal, recreation, industry, irrigation, and other uses. The plans, which reflect how water is currently used and its future use and distribution, are adopted as administrative rules. OWRD issues water rights on all waters in the state and enforces the exclusion of dams, impoundments, and placer mining in scenic waterways, and on tributary streams within scenic waterway boundaries. The Scenic Waterways Act requires the OWRC to review proposed land condemnations, and to review scenic waterway management plans and additions proposed by OPRD for designation by the governor. The OWRC must assure that any adverse effects to fish, wildlife, and recreation are not created by a water right in or upstream of a scenic waterway. Minimum perennial stream-flows are administrative designations established by the OWRC. A law passed in 1987 by the Legislature allows for the conversion of minimum perennial stream-flows to instream water rights. Three state departments may apply for these instream rights: OPRD, ODFW and DEQ. Once granted, the instream right is held by OWRD in trust for the people of Oregon.

Department of Land Conservation and Development

The DLCD, along with the guidance and authority of the Oregon Land Conservation and Development Commission (LCDC) works with cities, counties, and state agencies to develop and maintain Oregon's comprehensive land use plans and regulations. As part of these responsibilities, DLCD ensures that cities, counties, and state agencies have included scenic waterways in their Goal 5 planning pertaining to natural resources. Goal 5 planning requires comprehensive plans that will (1) ensure open space, (2) protect scenic and historical areas and natural resources, and (3) promote healthy and visually attractive environments. In Goal 5 planning, cities, counties, and state agencies must inventory the resource, identify conflicting uses which could impact the resource, and develop implementation strategies to resolve conflicting uses. They must notify OPRD of proposed changes in land use within scenic waterway corridors. Counties are required to protect identified resources through mandatory plans, policies, and zoning requirements.

Historic Preservation Office

The SHPO was created by the National Historic Preservation Act of 1966. Among SHPO's many roles is the evaluation of cultural property, in consultation with federal agencies or public nomina-

tions, to determine if the property qualifies for listing on the National Register of Historic Places. Properties that qualify for listing are protected according to the type and nature of the property.

Oregon Department of Geology and Mineral Industries

The DGMI has no authority over sites within the beds and banks of rivers. DGMI's role in developing a scenic waterway plan would be in designating past mining sites and indicating current activity in the area.

County and City Governments

The John Day River System is located in eleven Oregon counties. County and city governments adopt plans and ordinances which affect the John Day River System. Waste disposal, county zoning and local law enforcement are examples of important areas where the John Day River is affected. Collectively, these governments have a profound influence on the river due to the large amounts of private land affected by these governments.

County Sheriff Departments

All county sheriff departments are empowered to enforce Oregon State Statutes and river management laws and rules adopted and implemented by the OMB and OPRD. Enforcement generally occurs within each department's respective counties, however they do have authority to cross county lines. County sheriff activities, including search and rescue operations, are coordinated with state and federal law enforcement agencies and assisted by the general public.

September 5, 1993

Private Land Owners

Private lands comprise a large percentage of lands along the banks of the John Day River System. Cooperation with private land owners is essential to ensure protection and enhancement of river values. BLM will continue to consult and coordinate with affected private landowners on development, implementation and monitoring of this plan.

Native Americans

The Confederated Tribes of the Warm Springs Reservation and Confederated Tribes of the Umatilla Reservation have special interests in management of the John Day River System. Members of both of these organizations use the river and surrounding lands in traditional ways for hunting, gathering and religious purposes. Previous treaties between the United States Government and these tribes give special rights to their members regarding use and access of lands in the John Day Basin.

Agencies

Federal Agencies	State Agencies	Counties	Cities
BLM	ODFW	Crook	Canyon City
USFS	OPRD	Harney	Clarno
NPS	OSMB	Gilliam	Condon
SCS	ODEQ	Grant	Dale
BIA	ODA	Jefferson	Dayville
USFWS	ODF	Morrow	Fossil
NMFS	ODSL	Sherman	Izee
BPA	ODOT	Umatilla	John Day
BM (Mines)	OSP	Union	Kimberly
EPA	OWRD	Wasco	Lone Rock
BR (Reclamation)	DLCD	Wheeler	Long Creek
CE	SHPO	SWCD (Soil &	Mitchell
USGS	DGMI	Water Conservation	Monument
NPPC		Districts)	Mt. Vernon
FERC			Prairie City
			Service Cr.
			Spray

Native Americans

Confederated Tribes of the Warm Springs Reservation
 Confederated Tribes of the Umatilla Reservation
 Columbia River Intertribal Fish Commission

F. Related Plans and Programs

BLM Land Use Plans

The BLM has completed two Resource Management Plans (RMP) that include the John Day River System; the Two Rivers RMP (1986) and the John Day RMP (1985). These are comprehensive land use plans that provide guidelines for the management of BLM lands. The Two Rivers RMP covers BLM lands on the lower John Day River downstream from Kimberly. The John Day RMP covers BLM lands in the upper John Day River System upstream from Kimberly. Each of these RMPs was analyzed in an environmental impact statement (EIS) which documents the environmental consequences of the plan as well as numerous intergovernmental relationships. The plans establish land use goals and objectives for BLM-administered lands, mineral soils, watershed, rangeland, forests and woodlands, fish and wildlife habitat, recreation and cultural and archaeological resources. They incorporate management direction for roads and access, utility and transportation corridors, fire control, noxious weed control and continued interim management of wilderness study areas.

These two RMPs and associated supporting records provide the foundations for this plan which is a more detailed description of how BLM will manage the John Day River and associated BLM lands. They are available for review at the Prineville BLM District Office, along with associated supporting records.

U.S. Forest Service Land Use Plans

Each of the four national forests containing portions of the John Day River System have comprehensive land use plans guiding management of these forests. These forest plans are similar to the BLM's Resource Management Plans in structure and intent. There is an additional Wild and Scenic River Management Plan prepared for the North Fork of the John Day River by the USFS.

National Park Service Land Use Plans

The NPS has developed a comprehensive land use plan for the three units of the John Day Fossil Beds National Monument. This plan identifies how park visitor facilities and services will be provided and how visitors will be managed.

National Backcountry Byway Program

In 1989, the BLM dedicated fifty miles of public road which parallels the South Fork of the John Day River as a National Back Country Byway. The dedicated road extends from Dayville to the Malheur National Forest boundary. The South Fork John Day River Backcountry Byway is paved for 12 miles with the remainder an all-weather gravel road. The BLM byways program helps meet the national demand for pleasure driving opportunities, enhances recreation experiences and informs visitors about the values of public lands.

Wilderness Study Area Management

There are five BLM-managed Wilderness Study Areas adjacent to the South Fork and the John Day Mainstem that will be considered for possible wilderness designation by Congress. Suitability for wilderness is addressed in the BLM Statewide Wilderness EIS and associated Wilderness Study Report. Wilderness Study Areas are roadless federal lands that have met the minimum criteria of naturalness, solitude and other primitive attributes which causes them to be studied for possible Wilderness designation by the U.S. Congress. During the "study", the BLM considered other possible land uses for the area, the consequences of Wilderness designation and, with public involvement, made a recommendation to Congress as to whether or not they should be designated Wilderness.

Conservation Reserve Program

The Agricultural Stabilization and Conservation Service (ASCS) administers the U.S. Department of Agriculture (USDA) Conservation Reserve Program. This voluntary program pays farmers or ranchers who agree to take highly erodible soils out of cultivation for ten years. The program is

limited to no more than 25 percent of the highly erodible soils in each county throughout the nation. Enrolled lands are planted with grasses and not used for grazing or other commercial purposes. It is believed that the "reserve" lands make a substantial contribution to reduced erosion, thereby improving downstream water quality.

It is uncertain whether the program will continue to be funded or whether current participants residing in the John Day River basin will extend their enrollments. Even if the enrolled lands are returned to active cultivation in the mid-90s, the improved soil condition likely would provide residual beneficial effects to the ecosystem for another two or more years. The SCS also cooperates with appropriate weed control districts to deal with infestations of noxious weeds.

Stream Restoration Programs

The OWRD has a stream restoration program for the North Fork and Middle Fork subbasins of the John Day River. The federal Bureau of Reclamation is involved in a stream restoration program for the South Fork subbasin. These programs seek to complement and enhance resource management programs of other agencies, and are aimed at finding solutions to problems that have caused stream degradation in the past.

Aquatic and Riparian Habitat Management

The BLM, USFS, ODFW and other agencies are working to improve aquatic habitat in the John Day River watershed. Cooperative work continues between the BLM, USFS, ODFW, the Columbia River Intertribal Fish Commission (CRIFC), NMFS, NPPC, SCS, and private land owners, to implement riparian improvement projects (Table 4). The SCS has participated in the development of

Table 4: Aquatic and Riparian Habitat Management Programs John Day River System

Agencies	Purpose	Location
1. BLM, USFS, ODFW	Improve aquatic habitat	John Day Watershed
2. BLM, USFS, ODFW IFC, NMFS, NPPC SCS, ASCS	Improve riparian areas	
3. BLM, BPA, NPPC	Improve aquatic and riparian habitat	
4. ODFW	Improve fish habitat (rip-rap, boulders, trees, root-wads) and stabilize stream banks	Middle Fork RM54.5-58.0

coordinated resource management plans and the collection of resource data related to riparian habitat management.

Through the Pacific Northwest Electric Power Planning and Conservation Act (P.L. 96-501), the BLM and the Bonneville Power Administration (BPA) coordinate resource management programs with a memorandum of understanding. The memorandum allows regional and district coordination where similar interests exist regarding water resources and major utility corridors. The BLM, BPA and NPPC work together to stabilize and improve riparian zones and anadromous fish habitat through grants provided by the BPA. The BPA also assists the BLM in identifying and evaluating regional utility corridor options.

The FERC reviews proposals for new powersites and interstate energy-related pipelines. However, designation of part of the Mainstem John Day River and the entire South Fork as Federal Wild and Scenic Rivers precludes future dams or instream diversion structures on those sections. September 5, 1993

County Comprehensive Plans

The comprehensive plans for the eleven counties containing the John Day River System have been recognized by the Oregon Land Conservation and Development Commission as conforming with statewide planning goals and objectives. Virtually all private lands and all of the BLM and state-managed lands within the planning area are in county-designated "exclusive farm use", "forest" or other resource protection zones. Approved land uses compatible with county farm, forest and other resource zones include livestock grazing, growing crops and timber management, with an emphasis on protection and enhancement of natural values and cultural, visual and recreation resources. More specific land use planning information is provided for the river in Chapters IV and V.

Other Programs (See Table 5).

Table 5: Related Plans and Programs

Federal

- BLM Two Rivers RMP
John Day RMP
Wilderness Study Areas (mainstem and South Fork)
National Backcountry Byway (South Fork)
- USFS Wild and Scenic River Management Plan (North Fork)
Land Use Plans:
 - Malheur National Forest
 - Ochoco National Forest
 - Umatilla National Forest
 - Wallowa-Whitman National Forest
- FERC reviews hydropower sites and interstate energy pipelines
- NPS Comprehensive Land Use Plan for John Day Fossil Beds National Monument
- ASCS Conservation Reserve Program - Agriculture conservation and forest incentive program
- Cooperative Programs, Aquatic and Riparian Habitat Improvements
 - 1 BLM, USFS, ODFW
 - 2 BLM, USFS, ODFW, IFC, NMFS, NPPC, SCS, ASCS
 - 3 BLM, BPA, NPPC

State

- ODFW Habitat improvement programs

County

- Comprehensive land use plans for each county
- Soil and Water Conservation Districts (SWCD) plans and projects

II. River System Environment

A. Overview

General Description

The John Day River is located in a semi-arid area in northeastern Oregon. The basin is characterized by diverse landforms which range from plateaus in the northwest to glaciated alpine peaks in the southeast. Streamflow is derived primarily from melting snow, with most runoff occurring in April and May. Peak flows generally result from rain falling on snow in December and January and during snow melting in March, April and May. During late summer, streamflow is largely dependent upon ground water discharge. The major tributaries of the John Day River are the North, Middle and South Forks. Average annual discharge of the John Day River into the Columbia River is slightly more than 1.5 million acre-feet.

The John Day River Basin drains nearly 8,100 square miles of an extensive interior plateau lying between the Cascade Range in the west and the Blue Mountains in the northeastern section of Oregon. Elevations range from about 265 feet at the confluence with the Columbia River to over 9,000 feet in the Strawberry Range.

The basin includes portions of two major physiographic provinces; the Deschutes-Columbia Plateau and the Blue Mountains. The Deschutes-Columbia Plateau Province is a broad upland plain formed by floods of molten basalt overlain with wind-deposited loess. In contrast, the Blue Mountains Province is a diverse assemblage of older sedimentary, volcanic and metamorphic rock which was uplifted, tilted and faulted to form rugged hills and mountains. These two physiographic provinces roughly divide the basin in half near Service Creek. The mountainous upper basin lies to the south and east and the plateau-like lower basin to the north and west. The Blue Mountain anticline, a broad up-arching of the earth's crust, forms part of the divide between the John Day Basin and Columbia River tributaries to the north.

The upper basin is one of Oregon's most physiographically diverse regions, containing mountains, rugged hills, plateaus cut by streams, alluvial basins, canyons and valleys. Many alluvial streambottoms and adjacent benchlands are suitable for irrigated agriculture. In contrast to the upper basin, the lower basin is a plateau of nearly level to rolling, loess-covered Columbia River Basalt deeply dissected by the John Day River and tributaries.

Approximately 48,000 people live in or near the John Day River. Communities include Arlington, Condon, Monument, Dayville, Fossil, Dale, Spray, Mitchell, Izee, Kimberly, John Day, Canyon City and Prairie City. Major population centers within travel distance of the John Day Basin are shown on map 1. The economy is heavily based on agriculture and timber, with tourism a rising contributor.

Livestock production and agriculture are important sources of income throughout the basin. Cattle ranching and associated hay crops are major components of these activities. Grass and alfalfa hay, grown mostly along streambottoms upstream from Service Creek, are the predominant irrigated

crops in the basin. The forest products industry is most important in the forested upper portions of the basin around Spray, John Day and Prairie City. Land uses in the John Day Basin are delineated on map 2. While dryland production of grain crops remains the major economic activity, tourism and recreation are growing and contribute significantly to the basin economy.

Climate

The climate ranges from sub-humid in the upper basin to semi-arid in the lower basin. Mean annual temperature is 38°F in the upper basin and 54°F in the lower basin. Throughout the basin, actual temperatures vary from subzero during winter months to over 100°F during the summer. Seventy percent of the annual precipitation falls between November and March. Only five percent of annual precipitation occurs during July and August. The upper elevations receive up to 50 inches of precipitation annually, while 12 inches or less fall in the lower elevations. The average frost-free period is 50 days in the upper basin and 200 days in the lower basin. The growing season in the basin ranges from 120 to 180 days.

River System Description

A detailed description of the John Day River Subbasin has been prepared by the Columbia Basin Fish and Wildlife Authority (CBFWA 1990). A summary of the general environment taken from that plan follows.

The John Day River drains nearly 8,100 square miles in east-central Oregon. It is the longest free-flowing river with wild Chinook Salmon and steelhead in the Columbia River Basin. The basin includes a major part of Gilliam, Grant, and Wheeler counties, and portions of Crook, Harney, Jefferson, Morrow, Sherman, Umatilla, Union and Wasco counties. It is bounded by the Columbia River to the north, the Blue Mountains to the east, the Aldrich Mountains and Strawberry Range to the south and the Ochoco Mountains to the west.

The mainstem John Day River flows 284 miles from its source at an elevation near 9,000 feet in the Strawberry Mountains to its mouth at River Mile (RM) 218 on the Columbia River (EPA Reach 17070101-004-00). The largest tributary in the John Day Basin is the North Fork, which enters the mainstem at Kimberly (RM 185) and extends upstream 117 miles to its headwaters in the Blue Mountains at elevations near 8,000 feet. The Middle Fork John Day River originates just south of the North Fork and flows in a similar direction for 75 miles until they merge about 31 miles above Kimberly. The South Fork John Day River, tributary to the main stem near Dayville (RM 212), extends 60 miles to its headwaters south of the Aldrich Mountains at an elevation of about 6,000 feet (Map 1).

Flows in the John Day River exhibit wide fluctuations. Peak discharge occurs between late March and early June and varies between 3,600 cubic feet per second (cfs) and 5,259 cfs (OWRD 1990). The maximum discharge at McDonald Ferry (Lower Mainstem near Rock Creek) for the period of record (December 1904 to 1987) was 42,800 cfs. The minimum on record there was zero for part of September 2, 1966, August 15 - September 16, 1973 and August 13, 14, 19-25, 1977. Mean annual discharge for the water years 1906 through 1987 was 2,103 cfs (USGS 1990). The normal high

discharge (5,259 cfs) occurs during April and normal low discharge (578 cfs) occurs during July (OWRD 1990).

Water in the basin has been adjudicated. There is a total of 1,723 water diversions along the John Day River and its tributaries.

Although the John Day River provides habitat for one of the most significant runs of wild summer steelhead trout and Chinook Salmon within the Columbia River System (Adams, et al. 1990), it suffers from severe water quality and quantity problems. The river system exhibits severe turbidity, high water temperatures, extreme water flow fluctuations, high fecal bacterial counts, severe stream bank erosion, sedimentation, low dissolved oxygen, high nitrate levels and toxic effluents (USFWS 1968, ODWR 1986, ODEQ 1988, CBFWA 1990, 1991). In contrast, the John Day River was once described as a relatively stable river with good summer flows and water quality and a heavy riparian cover (Hudson's Bay Record Society 1950). Most water quality problems such as high water temperatures and low dissolved oxygen are due to watershed degradation and the loss of riparian habitat caused by more than 100 years of livestock overgrazing, mining and dredging, timber harvesting, road building and irrigation withdrawal (CBFWA 1990). Furthermore, at least one toxic chemical spill into the river in 1990 has helped to impede compliance with state water quality standards.

Public Access

The present access situation is discussed by river segment. Major boat and vehicle access points are identified on map 3. Less than half of the roads in the John Day Basin are paved. Most are gravel or dirt, many of which are not usable in wet weather.

Roads

1. Mainstem of the John Day River

The headwaters (RM 284) arise in the Malheur National Forest, and are paralleled by a forest road, then a county road to Prairie City at RM 263. There U.S. 26 begins a westerly route near the river through John Day (RM 249), Mt. Vernon (RM 239) and Dayville (RM213). There is no public land or public access to the river in this stretch. U.S. 26 continues near the river to the Picture Gorge unit of the John Day Fossil Beds National Monument (RM 206). The river turns north through Picture Gorge, then is followed by State 19 through Kimberly (RM 185), Spray (RM 171) and Service Creek (RM 157). There are many parcels of public land in this stretch providing easy access to the river.

From Service Creek to Twickenham (RM 144) there are no public vehicle access points. At Twickenham a county road crosses the river but there is no public boat or vehicle access to the river. From Twickenham to Bridge Creek (RM 135) a county road follows near the river and there is access to the area known as Priest Hole. Between Bridge Creek and Cherry Creek (RM 129) there are two primitive public boat access points. Between Cherry Creek and Clarno (RM 109) there is no public road near the river.

MAP 2

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Major Boat and Vehicle Access Points

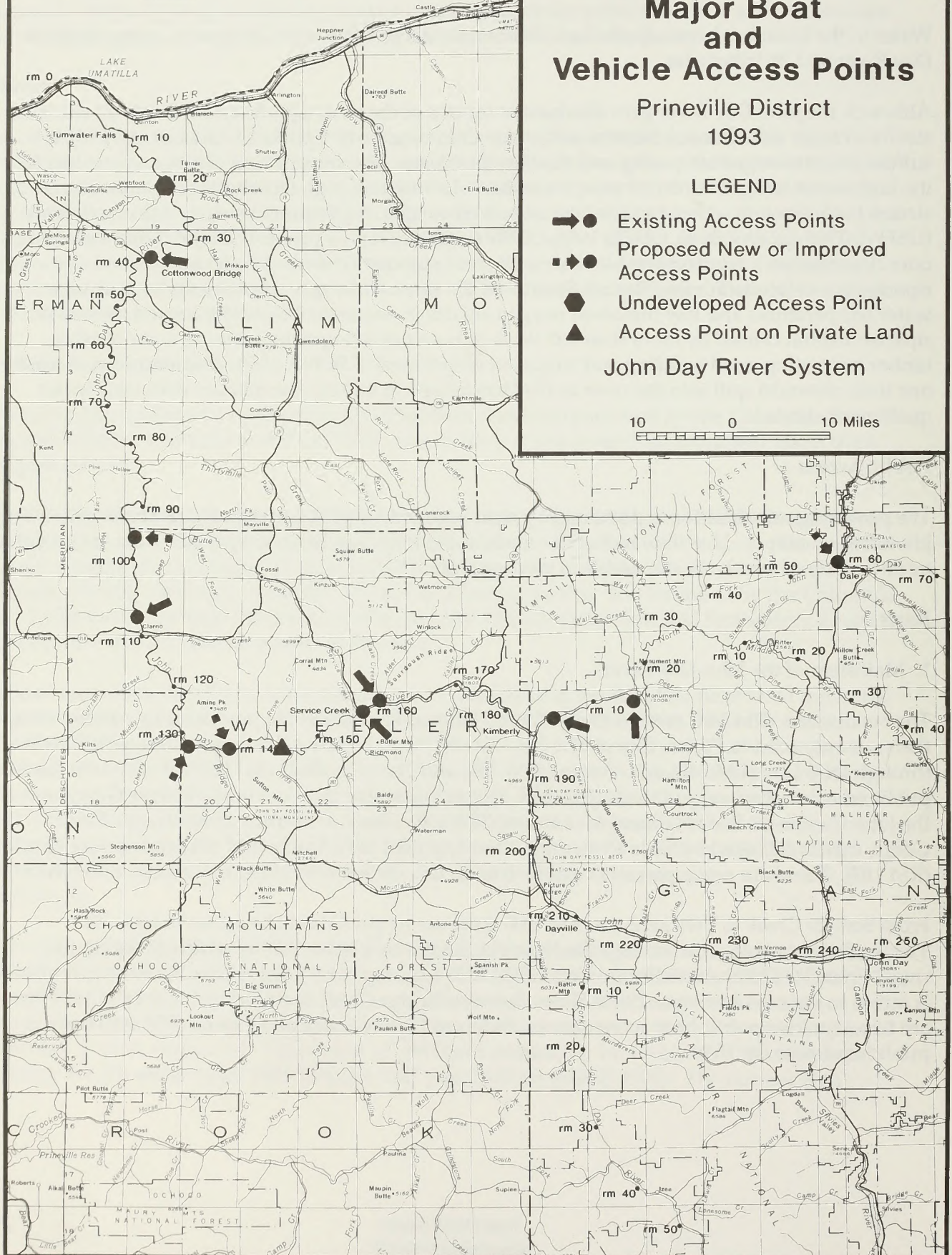
Prineville District
1993

LEGEND

- ➔● Existing Access Points
- ◆● Proposed New or Improved Access Points
- Undeveloped Access Point
- ▲ Access Point on Private Land

John Day River System

10 0 10 Miles



State Route 218 crosses the river at Clarno, where there is a well-used river access on state land.

Although private roads follow the river for many miles, or reach the river at a few points below Clarno, there is no public access for 70 miles to where Cottonwood Bridge (State Route 206) crosses. There J.D. Burres State Park (RM 39) provides an excellent vehicle and boat access area.

Once a boater leaves Cottonwood Bridge, he or she is committed to a 18-mile float to Rock Creek (RM 21) where there is a county road. There is no further public road access to the river. Tum-water Falls is downstream at RM 10, and below that there is boat access on Lake Umatilla, which backs up into the river valley from the John Day Dam on the Columbia River.

2. North Fork

This tributary begins at RM 112 near Columbia Hill on the Elkhorn Mountain Divide. The first road access is a county road crossing at RM 101. The next access is a county road at RM 71, which continues downriver 43 miles (crossing U.S. 395 at RM 60 near Dale) to RM 39 near Potamus Creek. A primitive road crosses a mixture of private and BLM-administered lands from Potamus Creek to Wall Creek (RM 23). Future public use of this road may be in question because some local land-owners feel that they have a legal right to control use of the portion of this road on their property. From Wall Creek to Monument there are six miles of county paved and gravel roads. A new public access to the river at Monument (RM 16) is being provided by the BLM. The county road continues downstream to Kimberly, where this tributary joins the mainstem John Day. Other than two BLM campgrounds near Kimberly, there is limited public access to the river in this stretch.

3. Middle Fork

Headwaters of the Middle Fork gather near Blue Mountain Summit where U.S. 26 crosses the divide. U.S. 26 follows the river closely between RM 74 and RM 71, then turns west, leaving the river. The next road access to the river is near RM 68 (Bates area). A county road then follows the river downstream (crossing U.S. 395 at RM 24) to RM 12 at Eight Mile Creek (two miles downstream from Ritter). Below that point there is no public road access.

4. South Fork

The South Fork begins to flow in Harney County at RM 60 in the Malheur National Forest. An all-weather road parallels the entire South Fork and provides easy access to the river. From the Malheur National Forest boundary to Antelope Creek (approximately seven miles), the county maintains a graveled road. From Antelope Creek to Pine Creek (ten miles), the county maintains a paved road. From Pine Creek to ten miles south of Dayville (20 miles), the BLM maintains a graveled road. For the last ten miles to Dayville, the county maintains a paved road (Table 6).

Trails

Developed and maintained trails are rare in the John Day River System. There are numerous undeveloped and unmaintained trails, however.

Table 6: Types and Miles of Road near John Day River and Major Tributaries.

	Main Stem	North Fork	Middle Fork	South Fork
Paved U.S. Highway	51	3	0	0
Paved State Route	109	13	3	0
Paved County Road	0	4	0	20
Gravel County or Public Road	16	2	56	27
Dirt Private Road	48+	19	1	0
Totals	224+	41	60	47

The river between Clarno and Tumwater Falls can be reached on foot by way of draws and breaks in the rim in a few places where a county road touches the rim and public land extends down to the river. Also, some portions of the river corridor can be reached from public access points by wading or hiking along game trails through public land. The South Fork and North Fork have easy foot access in numerous places. There are no maintained foot trails into or along the canyon bottom throughout the John Day River system. Access is available on the mainstem between Dayville and Service Creek where public land touches both the highway and the river.

Launching and Landing Sites

The main public access sites for boats are at Monument Recreation Site, Big Bend Campground, Muleshoe Campground, Service Creek, Clarno, Cottonwood Bridge and Rock Creek (McDonald). Primitive, undeveloped sites are available on public land between Twickenham and Clarno from a county road. Other primitive sites are available, but most require permission from private land-owners and many require four-wheel drive vehicles.

Land Ownership and Classifications

Ownership

This plan covers the BLM lands along more than 500 miles of the John Day River System. Tables 7, 8, 9 and 10 list the land ownership on the Mainstem, North Fork, Middle Fork and South Fork of the John Day River, in that order. The location of private, state and federal land along the river is provided on maps in Chapter IV.

Although some federal-private land exchanges are occurring between willing sellers, the ratio of private to public land in the basin does not seem to be changing dramatically. The NPPC (1991) reported that 62 percent of the land in the basin is private (5,027 square miles), 29.6 percent is USFS (2,396 square miles), 7 percent is BLM (587 square miles) and 1.4 percent is state and ODFW (83 square miles).

Table 7: Land Ownership Mainstem John Day, Dayville to Tumwater Falls

	River Miles (% of total)		River Frontage Miles (% of total)		Acreage (within 1/4 mile of river, avg.) (% of total)	
BLM*	84.25	(42)	168.5	(42)	26,960	(42)
State	3.75	(02)	7.5	(02)	1,200	(02)
Private	114.00	(56)	228.0	(56)	36,480	(56)
Total	202.00		404.0		64,640	

*23,700 acres of BLM land are withdrawn for potential powersite and reclamation purposes.

Table 8: Land Ownership North Fork John Day USFS Boundary near Dale to Kimberly

	River Miles (% of total)		River Frontage Miles (% of total)		Acreage (within 1/4 mile of river, avg.) (% of total)	
BLM	14.0	(23)	28.0	(23)	4,760	(24)
State	3.4	(05)	6.8	(05)	1,040	(05)
Private	43.6	(72)	87.2	(72)	14,000	(71)
Total	60.0		120.0		19,200	

Table 9: Land Ownership Middle Fork John Day Highway 395 to Confluence with North Fork

	River Miles (% of total)		River Frontage Miles (% of total)		Acreage (within 1/4 mile of river, avg.) (% of total)	
BLM	1.0	(05)	2.0	(05)	640	(09)
Private	21.0	(95)	42.0	(95)	6,400	(91)
Total	22.0		44.0		7,040	

Table 10: Land Ownership South Fork John Day USFS Boundary to Confluence with Mainstem

	River Miles (% of total)		River Frontage Miles (% of total)		Acreage (within 1/4 mile of river, avg.) (% of total)	
BLM	15.00	(29)	30.0	(29)	4,800	(29)
USFS	0.75	(01)	1.5	(01)	240	(01)
State	4.50	(09)	9.0	(09)	1,440	(09)
Private	31.75	(61)	63.5	(61)	10,160	(61)
Total	52.00		104.0		16,640	

Ownership of Bed and Banks

State ownership to the beds of navigable waterbodies was granted to Oregon in 1859 as an incidence of statehood and as an inherent attribute of state sovereignty protected by the U.S. Constitution. The beds of non-navigable waterbodies remained in the ownership of the United States or its grantees. Under state law, the Division of State Lands (DSL) is responsible for the management of the beds and banks of navigable waterbodies. These assets are to be managed for the greatest benefit of the people of this state under sound techniques of land management. Protection of public trust values of navigation, fisheries and public recreation are of paramount importance.

The navigability of the John Day River has not been established. Currently both the state and federal governments, and in some cases private property owners, claim ownership of the river's bed and banks.

The original federal test for determining navigability was established in the **Daniel Ball Case** over 100 years ago. The U.S. Supreme Court case clarified that rivers "are navigable in fact when they are used, or susceptible of being used, in their ordinary condition, as highways of commerce ...". Interpreting this requirement, subsequent court decisions have adopted this test for the purposes and have ruled that a waterbody is navigable if it was capable of use, at the time of statehood, as a public highway for transporting goods or for travel in the customary modes of trade and travel on the water.

The DSL has determined that there is sufficient evidence to support a claim of navigability of at least part of the John Day River System. However, no such claim has officially been made.

Table 11: Classification of National Wild and Scenic Rivers, John Day River System

John Day River Mainstem	Miles	Administration
Wild River	0	
Scenic River	0	
Recreational River	147.5	
Total	147.5	BLM and OPRD
North Fork		
Wild River	27.8	
Scenic River	10.5	
Recreational River	15.8	
Total	54.1	USFS
South Fork		
Wild River	0	
Scenic River	0	
Recreational River	47.0	
Total	47.0	BLM

For purposes of managing the John Day River, any non-federal activities or land uses such as new utility or transportation corridors and boat ramps or similar facilities that impose into or cross a waterway below ordinary high water will require an easement from the State Land Board. Existing non-federal facilities will require an easement at such time as they undergo major structural alteration, replacement or relocation. In addition, removal of sand and gravel requires a royalty lease and non-federal use that occupies any area of submerged or submersible land requires a waterway lease.

Classifications

Following is a list of important land classifications and designations in the John Day River System.

1) Wild and Scenic Rivers

Three segments of the John Day River System have been designated by the U.S. Congress as National Wild and Scenic Rivers (Table 11).

2) Wilderness

There are two designated wilderness areas and five areas being considered for possible wilderness designation along the John Day River System. Wilderness areas are roadless tracts of federal lands that may be designated only by the U.S. Congress.

The two designated wilderness areas are located on two national forests. One is the North Fork John Day Wilderness located along the North Fork of the John Day River in the Umatilla National Forest. The other is the Black Canyon Wilderness, located on a tributary to the South Fork of the John Day River in the Ochoco National Forest.

The mainstem of the John Day River contains four wilderness study areas (WSA) on BLM-administered lands. One is located upstream from Clarno and three lie between Butte Creek and Cottonwood Bridge. The fifth WSA is located on BLM lands along the South Fork of the John Day River. These WSA's have been studied by the BLM for possible wilderness designation. The results of these studies, along with BLM recommendations, have been submitted to the Congress for their consideration and action. These WSA's are managed to preserve their wilderness character until Congress designates them as wilderness areas or releases them from consideration.

3) Oregon State Scenic Waterways

The State of Oregon has designated four segments of the John Day River System as State Scenic Waterways. These segments are:

John Day River Mainstem Tumwater Falls to Parrish Creek (160 miles)

North Fork John Day River River Mile 20.2 above Monument to North Fork John Day Wilderness (56 miles)

Table 12: Classification of State Scenic Waterways, John Day River System

John Day River	No. of Miles
Mainstem	
Natural River Area	31
Scenic River Area	116
Recreational River Area	13
Total	160
North Fork	
Recreational River Area	3
Accessible Natural River Area	53
Total	56
Middle Fork	
Natural River Area	11
Scenic River Area	60
Total	71
South Fork	
Scenic River Area	5
Accessible Natural River Area	25
Total	30

Middle Fork John Day River North Fork confluence to Crawford Bridge (71 miles)

South Fork John Day River North Boundary of Murderers Creek Wildlife
Management Area to Post-Paulina Road (30 miles)

OPRD has classified these scenic waterways as shown in Table 12.

4) Oregon State Wildlife Refuge

There is a long-standing state wildlife refuge along the mainstem from Thirtymile Creek down to the Columbia River. Its purpose is to protect wintering and nesting waterfowl. No waterfowl hunting is allowed.

Social and Economic Conditions

Although the entire John Day River System watershed encompasses eleven Oregon counties, six of them are most directly affected by this plan. These are Gilliam, Grant, Jefferson, Sherman, Wasco and Wheeler. This section describes their population, employment and economic patterns.

Population

There are 48,400 residents in the six counties that border the river. Wasco County boasts the largest population which is concentrated along the Columbia at the mouth of the John Day and the Deschutes Rivers. Nearly half of the people living in the John Day basin reside in rural areas or unincorporated towns.

Communities in the John Day basin are typically small with populations of 25 to 1,870 (in John Day). There are 17 communities between Dayville and the Columbia River with an average population of less than 250 that depend upon various aspects of river use for their income. Some of the smaller unincorporated towns have only one all-purpose store and may not have gasoline for sale. Those businesses adjacent to the river attribute about 90 percent of their clientele to river use. Restaurants and shuttle services have seasonal highs and lows but seem to operate year-round.

Table 13 lists the population estimates in the six counties throughout the basin for the years of 1980, 1985 and 1990.

Between 1988 and 1990, the population of The John Day basin as a whole grew. However, growth has been slight and only Jefferson County has experienced an increase in population. Even Wasco County, which has the largest single population center (The Dalles), has seen a slight decline in its population over the last 10 years. Table 14 lists the population shifts in the six counties throughout the basin from 1980 to 1990.

Employment

Between 1988 and 1990, the number of individuals employed in the John Day Basin grew from 23,760 to 24,750. However, the unemployment rate in the basin only decreased by four tenths of one percentage point. Jefferson County experienced the largest amount of employment growth while Wheeler County experienced the least amount of total employment growth.

Employment opportunities in the John Day Basin include agriculture, wood products manufacturing, other manufacturing such as construction, trade, government and service and retail businesses that serve small rural communities. Although it is declining in importance, agriculture is still the single largest employer in the basin. Table 15 lists the number of people employed and unemployed in the various job sectors throughout the John Day basin in 1988 and 1990. Tables 16, 17, 18, 19, 20, and 21 list the number of people employed and unemployed in the various job sectors by county in 1988 and 1990.

As indicated in the above-mentioned tables the growth in employment in the John Day Basin can generally be attributed to the increased availability of service sector jobs. Many counties now

Table 13: City & County Populations, John Day Basin, 1980, 1985, 1990

County	Community	1980	1985	1990
<i>John Day Basin</i>		47,283	47,780	48,400
Gilliam		2,057	1,900	1,750
	Arlington	521	450	455
	Condon	783	720	650
	Unincorporated	753	730	645
Grant		8,210	8,230	7,900
	Canyon City	639	610	660
	Dayville	199	205	180
	Granite	17	15	15
	John Day	2,012	1,985	1,875
	Long Creek	252	245	255
	Monument	192	180	180
	Mt. Vernon	569	620	550
	Prairie City	1,106	1,125	1,160
	Seneca	285	265	190
	Unincorporated	2,939	2,980	2,835
Jefferson		11,599	12,150	13,700
	Culver	514	505	565
	Madras	2,235	2,320	3,400
	Metolius	451	455	450
	Unincorporated	8,399	8,870	9,289
Sherman		2,172	2,070	1,950
	Grass Valley	164	180	160
	Moro	336	320	305
	Rufus	352	375	330
	Wasco	415	445	395
	Unincorporated	905	750	760
Wasco		21,732	22,000	21,700
	Antelope	39	110	45
	Dufur	560	550	530
	Maupin	495	500	460
	Mosier	340	350	255
	Shaniko	30	30	25
	The Dalles	10,820	10,900	11,000
	Unincorporated	9,448	9,430	9,385
Wheeler		1,513	1,430	1,400
	Fossil	535	530	430
	Mitchell	183	190	160
	Spray	155	190	150
	Unincorporated	640	520	660

Source: Population Estimates for Oregon 1980-1990 Center for Population Research and Census Control Portland State University, March 1991

Table 14: Changes in Population, John Day Basin, 1980-1990.

County	Community	Population Change (%) 1980-1990
<i>John Day Basin</i>		+2.4
Gilliam		-14.9
	Arlington	-12.7
	Condon	-17.0
	Unincorporated	-14.3
Grant		-3.8
	Canyon City	+3.3
	Dayville	-9.6
	Granite	-5.9
	John Day	-6.8
	Long Creek	+1.2
	Monument	-6.2
	Mt. Vernon	-3.3
	Prairie City	+4.9
	Seneca	-33.3
	Unincorporated	-3.5
Jefferson		+18.1
	Culver	+9.9
	Madras	+52.1
	Metolius	-0.3
	Unincorporated	+10.6
Sherman		-10.2
	Grass Valley	-2.4
	Moro	-9.2
	Rufus	-6.2
	Wasco	-4.8
	Unincorporated	-16.0
Wasco		-0.1
	Antelope	+15.4
	Dufur	-5.4
	Maupin	-7.1
	Mosier	-25.0
	Shaniko	-16.7
	The Dalles	+1.7
	Unincorporated	-0.7
Wheeler		-7.5
	Fossil	-19.6
	Mitchell	-12.6
	Spray	-3.2
	Unincorporated	+3.1

Table 15: Average Resident Labor Force John Day Basin Employment & Unemployment

Category	1988	1990
Labor Force	23,760	24,750
Unemployed	1,820	1,810
Employed	21,940	22,940
Agriculture	6,460	6,350
Manufacturing	3,095	3,310
Service	12,385	13,280
Trade	3,525	3,830
Government	4,505	4,780
Other	4,355	4,670

Source: State of Oregon, Employment Division Department of Human Resources, April 1991

Table 16: Average Resident Labor Force Gilliam County Employment & Unemployment

Category	1988	1990
Labor Force	890	990
Unemployed	40	30
Percent of labor force	4.5%	3.0%
Employed	850	960
Agriculture	420	450
Manufacturing	5	5
Service	425	505
Trade	75	100
Government	170	180
Other	180	225

Source: State of Oregon, Employment Division Department of Human Resources, April 1991

Table 17: Average Resident Labor Force Grant County Employment & Unemployment

Category	1988	1990
Labor Force	4,450	4,630
Unemployed	420	390
Percent of labor force	9.4%	8.4%
Employed	4,030	4,240
Agriculture	1,440	1,440
Manufacturing	630	650
Service	1,960	2,150
Trade	420	440
Government	1,090	1,160
Other	450	550

Source: State of Oregon, Employment Division Department of Human Resources, April 1991

Table 18: Average Resident Labor Force Jefferson County Employment & Unemployment

Category	1988	1990
Labor Force	6,860	7,200
Unemployed	430	460
Percent of labor force	6.3%	6.4%
Employed	6,430	6,740
Agriculture	1,840	1,890
Manufacturing	1,320	1,470
Service	3,270	3,380
Trade	970	1,040
Government	1,020	1,050
Other	1,280	1,290

Source: State of Oregon, Employment Division Department of Human Resources, April 1991

Table 19: Average Resident Labor Force Sherman County Employment & Unemployment

Category	1988	1990
Labor Force	780	890
Unemployed	70	50
Percent of labor force	9.0%	5.6%
Employed	710	840
Agriculture	250	280
Manufacturing	0	0
Service	460	560
Trade	130	210
Government	265	285
Other	65	65

Source: State of Oregon, Employment Division Department of Human Resources, April 1991

Table 20: Average Resident Labor Force Wheeler County Employment & Unemployment

Category	1988	1990
Labor Force	610	650
Unemployed	70	70
Percent of labor force	11.5%	10.8%
Employed	540	580
Agriculture	290	300
Manufacturing	10	15
Service	240	265
Trade	40	40
Government	140	145
Other	60	80

Source: State of Oregon, Employment Division Department of Human Resources, April 1991

Table 21: Average Resident Labor Force Wasco County Employment & Unemployment

Category	1988	1990
Labor Force	10,170	10,390
Unemployed	790	810
Percent of labor force	7.8%	7.8%
Employed	9,380	9,580
Agriculture	2,220	1,990
Manufacturing	1,130	1,170
Service	6,030	6,420
Trade	1,890	2,000
Government	1,820	1,960
Other	2,320	2,460

Source: State of Oregon, Employment Division Department of Human Resources, April 1991

recognize the importance of shifting towards an economy based on service and retail businesses to support the growing tourism industry in the area. For example, sensing the need to diversify its economy, Grant County in 1988 adopted tourism as the basis for its future economic strategy.

A closer look at the tourism industry in the basin portrayed that very few retail or service businesses gross more than \$200,000 annually. Most are single family operations that hire one or two seasonal employees when additional help is required. Nearly all businesses stay open seven days a week during high use periods to accommodate the tourist trade. While spring and summer are generally the busiest seasons, river traffic during the winter is increasing due to anglers pursuing steelhead.

All businesses contacted expressed concern about litter along the river and its water quality. They seem willing to assist to keep the river clean and say that they desire more BLM presence on the river. More drinking water sources and more toilets are frequently mentioned as needed additions to the river. The need for additional boat ramps and concerns about road closures were also mentioned. Several businesses mentioned the need for a brochure or map that highlights public access to the river as well as campsites that are open to the public while floating the river.

Travel Dollars

Travel and tourism dollars spent in the John Day basin are low when compared to other Oregon counties. However, these dollars play an important economic role in these counties which have low populations.

Table 22 lists the amount of travel dollars spent in the counties comprising the John Day Basin in 1990 and 1991.

Table 23 lists 1991 travel expenditures and other economic impacts of travel and tourism in John Day Basin counties.

Table 22: Travel expenditures in John Day Basin counties (in thousands).

County	1991	1990	Percent Change
Grant	6,854	7,059	-2.9
Jefferson	26,623	23,375	13.9
Sherman	11,608	11,537	0.6
Wasco	39,780	35,155	13.2
Wheeler	1,392	1,352	3.0
Gilliam	1,231	1,202	2.4
Total	87,488	79,680	

Source: Travel Related Economic Impacts and Visitor Volume in Oregon: 1991 Dean Runyon Associates, Portland, Oregon

Table 23: 1991 Travel impacts in John Day Basin counties (in thousands).

County	Travel Expenditures	Payroll	Employment	Tax Receipts	
				Local	State
Grant	6,854	1,079	130	50	283
Jefferson	26,623	4,378	434	129	1,177
Sherman	11,608	1,822	179	0	567
Wasco	39,780	7,106	774	221	1,250
Wheeler	1,392	198	23	0	68
Gilliam	1,231	202	25	0	47
Total	87,488	14,785	1,565	400	3,392

Source: Travel Related Economic Impacts and Visitor Volume in Oregon: 1991 Dean Runyon Associates, Portland, Oregon

Income

Per capita income in the State of Oregon is about 90 percent of the national average. Whereas the national average is \$14,639, the per capita income in the State of Oregon is \$13,354 (1986).

The per capita income in the John Day Basin varies by county. For example, due to fewer residents and high grain yields from large farms, Sherman County boasts the highest per capita income in the John Day Basin.

On the other hand, Grant County's per capita income is the lowest in the basin. Table 24 describes the per capita income by county in The John Day Basin.

Table 24: Per capita income (by county) in the John Day Basin, 1991

	Grant	Jefferson	Sherman	Wasco	Wheeler	Basin
Total Personal Income (thousands)	115,574	176,809	47,455	338,741	24,607	703,186
Non-farm (%)	86.6	89.9	55.5	94.3	64.5	87.7
Farm (%)	13.4	10.1	44.5	5.7	35.5	12.3
Per-capita Income	13,589	13,880	24,474	16,672	19,560	15,801
Population	8,300	12,700	1,900	20,300	1,300	44,500

Source: Department of Commerce Regional Economic Information System Bureau of Economic Analysis, April 1991

As stated earlier, agriculture is currently the single largest employer in the basin yielding substantial income for local residents. Jefferson County boasts the strongest crop production in the John Day Basin. In fact, yields of peppermint, potatoes and several types of grain, both irrigated and non-irrigated, are among the highest in the state. Table 25 lists the 1990 gross farm and ranch production sales by county in the John Day Basin.

B. Resource Values

The National Wild and Scenic Rivers Act of 1968 requires that, to be designated for the national system, a river must be free-flowing and have at least one outstandingly remarkable value. The Oregon Scenic Waterways Act requires that a river (or segment) must meet the following criteria to be added to the state system:

- 1 Relatively free-flowing and have a pleasing scene (or these conditions are restorable).
- 2 Possesses natural and recreation values of outstanding quality.
- 3 Large enough to sustain substantial recreation use and to accommodate existing uses without undue impairment of the natural values of the resource or quality of the recreation experience.

Oregon Administrative Rule (736-40-020(1)) emphasizes the need for protecting the special attributes of scenery, fish, wildlife, scientific and recreation features.

Since these criteria are not exactly the same, and since the segments of rivers recognized in the national and state systems differ, resource values will be discussed both from the national perspective and the state perspective.

Table 25: Gross farm and ranch production(in thousands) sales/1990 (by county) in the John Day Basin.

	Grant	Jefferson	Sherman	Wasco	Wheeler	Gilliam	Basin
All Crops	2,999	40,981	16,934	30,411	2,178	9,289	102,792
All Animal Products	15,756	8,095	4,916	6,368	6,384	4,816	46,335
Total	18,755	49,076	21,850	36,779	8,562	14,105	149,127

Source: 1990-91 Oregon Fisheries Statistics USDA Oregon Agricultural Statistics Service 635 Capital St. N.E., Salem Oregon

Outstandingly Remarkable and Significant National Values

The Lower (Mainstem) John Day River from Service Creek to Tumwater Falls, the South Fork John Day and the North Fork John Day have been designated as National Wild and Scenic Rivers.

The river-related values listed in the 1968 Act are scenic, recreational, geologic, fish and wildlife, historic and cultural. In order to be assessed as outstandingly remarkable, a river-related value must be a unique, rare or exemplary feature that is significant at a regional or national level. Those river-related values that are not assessed as outstandingly remarkable but contribute substantially to the functioning of the river system and river setting are considered "significant".

The outstandingly remarkable values of the Lower John Day Wild and Scenic River identified by Congress are scenery, recreational opportunities and fish. Archeological, paleontological, geological, historical and wildlife values were identified as significant values. The BLM subsequently found wildlife, geological, paleontological and cultural resources to be outstandingly remarkable values. The BLM also identified botanical and ecological values as significant.

The outstandingly remarkable values of the South Fork of the John Day Wild and Scenic River identified by Congress are scenery and recreational opportunities. Fish, wildlife, paleontological and cultural values were identified as significant. The BLM subsequently found fish, wildlife, paleontological and botanical resources to be outstandingly remarkable values. The BLM also identified geological and cultural resources as significant.

The resource assessment conducted by the USFS for the North Fork John Day River concluded that the outstandingly remarkable values for the wild and scenic segment (54.1 miles) are: scenery, cultural, recreation, fisheries and wildlife. Geology was not found to be an outstandingly remarkable value, because the geological features along the North Fork are typical of many other nearby drainages. Table 26 is a compilation of the outstandingly remarkable and significant values of the John Day Wild and Scenic River System.

Table 26: Outstandingly Remarkable and Significant Values of the John Day Wild and Scenic River System

	Outstandingly Remarkable	Significant
Lower John Day		
<i>Congress</i>	Scenery Recreational Opportunities Fish	Archeological Paleontological Geological Historical Wildlife
<i>BLM</i>	Wildlife Geological Paleontological Cultural	Botanical Ecological
South Fork		
<i>Congress</i>	Scenery Recreational Opportunities	Fish Wildlife Paleontological Cultural
<i>BLM</i>	Fish Wildlife Paleontological Botanical	Geological Cultural
North Fork		
<i>U.S. Forest Service</i>	Scenery Cultural Recreation Fisheries Wildlife	

The BLM's additional findings of outstandingly remarkable and significant values are documented in resource assessments developed for the wild and scenic segments of the John Day River System. These resource assessments are available for review at the BLM Prineville District Office.

State Scenic Waterways Special Attributes

The State Scenic Waterways designation has been applied to the John Day along the Mainstem from Tumwater Falls to Parrish Creek and to segments of the North Fork, Middle Fork and South Fork.

River-related values found to be special attributes in the State Scenic Waterways System must be found through a resource analysis to be unique, rare or exemplary features that are significant at a regional or statewide level. OPRD has done some analysis work for natural and cultural values found within the Mainstem, North Fork, Middle Fork and South Fork John Day segments. The most complete resource analysis work was done for the scenic waterway segments where they overlap with segments designated as federal wild and scenic. These scenic waterway segments are:

- 1 Mainstem from Tumwater Falls to Service Creek.
- 2 North Fork from wilderness area boundary to U.S. 395.
- 3 South Fork from the north boundary of the Murderers Creek Wildlife Management Area to the Post-Paulina Road.

On the mainstem overlapping segment OPRD found that scenery, recreation opportunities, fish, wildlife, geological, paleontological, botanical and cultural resources are special attributes. On the North Fork overlapping segment OPRD found that scenic, cultural, recreational, fish and wildlife resources are special attributes. On the South Fork overlapping segment OPRD found that scenery, recreation opportunities, fish, wildlife, botanical, geological, cultural and paleontological resources are special attributes.

The OPRD resource analysis between Service Creek and Parrish Creek on the Mainstem John Day has not been completed, but fish and wildlife values have been determined to be special attributes based on information from ODFW. Scenery was not found to be a special attribute for this segment because State Highway 19 is in close proximity to the river.

On the North Fork between U.S. 395 and Monument OPRD found that scenery, fish, wildlife, and recreation opportunities are special attributes. More inventory work needs to be done before historic, prehistoric, geologic and other resources can be evaluated. On the Middle Fork John Day, from Crawford Bridge to its confluence with the North Fork, OPRD found that scenery, fish and wildlife are special attributes. More inventory work is needed before geologic, historic, prehistoric, and other values can be analyzed for their relative importance. In analyzing these resource values, OPRD derived information from USFS, ODFW and the BLM as well as its own field work.

Scenery

The John Day River System contains an abundance of high quality scenery which contributes to the wild and scenic designations and is extremely important to visitors and residents of the area. Scenery is identified as an outstandingly remarkable value in both the Lower Mainstem John Day and South Fork of the John Day Wild and Scenic Rivers. Scenery along the North Fork Wild and Scenic River also was found to be an outstandingly remarkable value by the USFS. OPRD has identified scenery as a special attribute along the Mainstem John Day from Tumwater Falls to Service Creek and on the North Fork, Middle Fork and South Fork Scenic Waterways. The canyons include vertical cliffs more than 500 feet high made up of dramatic basalt rock outcrops. Diverse vegetation, from fir and pine trees in the uplands to high desert communities of sagebrush and juniper in the lowlands dot the landscape along the South, North and Middle Forks of the John Day River. Ranches, intermingled with public lands, add a pleasant contrast. Further, no dams or major developments impact the visual resource values in the basin.

All lands along the John Day River System have been designated as Visual Resource Management Class II lands. This means that any changes to the visual landscape on federal lands must be of low impact. Visual impacts must blend with the surroundings and not draw the eye of the viewer.

Vegetation

General Description

The vegetation of the John Day River System is composed of a diversity of plant communities. The composition and condition of many of these plant communities have changed from historic times due primarily to intensive livestock grazing and fire suppression. Introduction and/or invasion of non-native plants throughout the system and timber harvesting near the headwaters of the Mainstem and all three forks also have greatly influenced the changes in vegetation from historic times.

Existing plant communities in the John Day River Basin can be characterized into four main zones: riparian, riverine terrace, upland and forest-woodland.

Distinctive plant associations are found in the basalt cliffs, rock outcrops, gravels and clays throughout the John Day River Basin. Plants specific to these habitats include alumroot, thelypody, cockscomb cryptantha and yellow bee plant.

The botanical values were found to be outstandingly remarkable in the BLM Resource Assessment for the South Fork of the John Day Wild and Scenic River. Botanical values were judged to be significant for the Mainstem John Day. Botanical resources also were identified as special attributes by OPRD for the Mainstem segments and the North, Middle and South Forks designated as State Scenic Waterways.

Botanic values along the North Fork were judged by the USFS as not warranting the outstandingly remarkable classification.

Riparian Vegetation

The riparian zone (the strip of vegetation along the river) historically consisted of cottonwood, willows, alder, river birch, grasses, and sedges. Today, the riparian zone generally contains few trees and shrubs. Willows and alders are rare and existing trees are typically junipers or ponderosa pines in most areas. Grasses and sedges are more common than trees and their abundance varies widely, depending upon man's influences.

Some of the riparian communities appear to have had a significantly different vegetative composition and occupied more acreage than what is viewed today. Evidence exists which supports the idea that some riparian communities once had more shrub and tree canopies or thick stands of Great Basin wild rye or other grasses. For example, photographic records from the late 1800's indicate that the floodplains above Picture Gorge once were dominated by a cottonwood woodland. The area presently is used as hay meadows with remnant cottonwood stands. Throughout the river corridor, many cottonwood and shrub stands are remnants of larger stands previously removed to allow for agricultural uses on those sites. In a few cases, the stands have been removed by a change in the river's course.

Present riparian conditions in the John Day River Basin vary from extremely degraded with little or no vegetation to nearly pristine with climax vegetation. However, from the standpoint of a functioning ecological system, most riparian plant communities today contain inadequate vegetational diversity and structure. Plant communities represented vary from mixed grass, sedge and rush meadows with no shrub or tree overstory to communities dominated by a ponderosa pine or Douglas fir overstory with alder, willow, sedges and grasses in the understory. These latter communities represent a 80 percent canopy closure. Finally, throughout the river system, some riparian areas are occupied by cottonwood, alder and willow communities found in pure or mixed stands.

On the Mainstem downstream from Spray, woody vegetation is primarily willows and mock orange with small amounts of rose and currant. The most common woody species upstream from Spray include birch, cottonwood, dogwood and elderberry.

Much of the riparian habitat along the John Day is now, and was historically, occupied by rock and gravel. Inventories completed by the BLM in 1981 from Kimberly to the mouth found that 55 percent of the riparian habitat was rock and gravel. Annual high spring flows and scourings help maintain that condition. Artificial channelization, flood-diking after the 1964 flood and SCS programs in the 1970's all have resulted in changes in riparian habitat.

The majority of the riparian habitat along the river is presently in a less than desirable condition. However, riparian conditions in certain areas have improved in the last 10 to 15 years due to changes in livestock grazing practices. The changes include reduction of livestock numbers, changes in seasons of use by livestock and adding range improvements such as juniper rip-rap on stream banks, water developments and fences to better distribute livestock. Increased cover of grasses, trees and shrubs within the riparian areas and reduced erosion of riverbanks has resulted in these managed areas.

Riverine Terrace

The riverine terrace includes the primary terrace immediately adjacent to the river as well as any secondary or tertiary terraces above. The potential natural vegetation on these deeper soils is big sagebrush and grass, primarily Great Basin wild rye, bluebunch wheatgrass and a complement of various forbs. However, due primarily to years of livestock grazing and introduction of non-native plants, the understory now consists of annual grasses and forbs such as cheatgrass, foxtail, filaree, tumbled mustard and other invasive species. Western juniper also has increased on some terraces.

Where juniper has spread as a result of disrupted natural processes, water storage in the soil may be reduced. Increasing juniper densities and size apparently reduces understory plant cover. A reduction of plant cover tends to reduce soil infiltration and increase runoff causing erosion and sedimentation. Preliminary research also indicates that junipers transpire a large amount of the total moisture retained by the soil thus making water less available to the streams.

Timber harvest and thinning operations increase the amount of rain and snow reaching the ground surface. The removal of canopy cover also decreases evapotranspiration (the amount of water removed from the soil by vegetation). Some operations compact soil, increasing runoff and decreasing water infiltration into the soil. Roads can act as water transportation systems and speed

runoff. These factors can increase the volume and rate of water entering the river system. This situation can make high flow events more intense and may result in less available water during the late summer when low water volumes result in high temperatures and low oxygen for fish, and less available water for agricultural irrigation.

Uplands

The upland zone is often characterized by steep slopes, shallow soils and relatively undisturbed vegetation. The existing plant community is similar to the potential community and is dominated by bluebunch wheatgrass with lesser amounts of big and low sagebrush. Other plants include arrowleaf balsamroot, desert parsley and widely scattered junipers.

In general, livestock grazing has had less effect on the upland zone due to the lack of water and the difficulty in traversing the terrain. Where the soils are deeper and the slopes are more accessible to livestock, a portion of the bunchgrass component has been replaced by annual grasses and forbs and the sagebrush/juniper component has increased in dominance in this area.

Forests and Woodlands

Roughly 45 percent of the John Day Basin is considered to be non-forested or non-woodland. However, rapid encroachment of junipers into rangeland is increasing the percentage of lands with woodland vegetation. This change in vegetative composition is significant in its potential effect on watershed and wildlife and livestock forage. Nearly one-half of the basin's uplands are forested with ponderosa pine, Douglas fir, lodgepole pine and white fir which are desirable for commercial timber production. Timber harvest, thinning operations and other forest management practices can greatly influence the forest ecosystem, potentially affecting water quality and quantity in the John Day River System.

Healthy forests provide an important natural underground reservoir for water storage potential within the river system. Enhanced water storage helps mitigate potential negative effects of seasonal peak and low flows by releasing water at a fairly constant rate throughout the year.

Special Status Species Plants

The John Day River Basin supports several special status plants which are normally associated with a specific, limited habitat. These special status plants, some of which are of international importance, contributed to the finding that botanical values are an outstandingly remarkable value of the wild and scenic segments. A candidate for listing as endangered or threatened, *Astragalus diaphanus* var. *diurnus* (South Fork John Day milkvetch), is found in segment 10 (South Fork) and is found nowhere else in the world. Two other candidates for listing as endangered or threatened, *Thelypodium eucosmum* (arrowleaf thelypody) and *Mimulus washingtonensis* (Washington monkeyflower) are found within segments 3 and 4 (Mainstem) and 6 (North Fork). The monkey flower is found in segment 10 (South Fork) and the arrow leaf thelypody is suspected to occur in segment 10. These species generally inhabit specific soils or areas with specific moisture regimes and therefore have limited available habitat. *Rorippa columbiae* (Columbia cress), another candidate,

is suspected to occur along the entire river since one of its known habitats is river gravels subjected to ephemeral flooding.

Cryptantha rostellata (beaked cryptantha) is known from segments 2 and 3 (Mainstem) and occurs on seemingly non-specific dry soils with bunchgrass. This species is a BLM "Assessment Species" and is considered to be threatened or endangered in Oregon. It is more common elsewhere.

Two other species of local interest, *Pediocactus simpsonii* var. *robustior* (hedgehog cactus) and *Chaenactis nevii* (Nevius' false yarrow) are known from segments 3 and 4 (Mainstem) and may occur in other segments as well. These have no special status but are tracked by those interested in the native flora of the region and are often associated with the John Day Basin.

Threats to these plants can include habitat conversion, livestock grazing, erosion and recreational activities, depending on species and location.

Noxious Weeds

Noxious weed infestations as defined by the Oregon Department of Agriculture (ODA), are becoming well established along all segments of the John Day River. These infestations now occur mainly along the valley bottoms and drainages, but are spreading outward onto slopes. They are increasing in area and threaten native vegetation and established uses of the land. These weeds are easily spread by wind, water, horses, motor vehicles, recreation users, wildlife and livestock. The most common noxious weeds are diffuse, spotted and Russian knapweed, yellow star thistle, dalmatian toadflax, skeleton weed, scotch thistle, whitetop, poison hemlock, medusahead, Canada thistle and field bindweed.

Fish

Historically, the John Day River System was a major producer of anadromous fish, including spring Chinook salmon and summer steelhead. Degradation of the freshwater habitat and other factors have reduced the populations of these fishes to small fractions of their former abundance. Total runs of sea-run fish in the past were estimated to have been over 100,000 adult fish, while currently the spawning populations range from 1,000 to 5,000 spring Chinooks and from 7,000 to 40,000 summer steelhead.

One reason for the tenacity of the anadromous runs is that fish passage on the John Day is not interrupted or blocked by any significant dams. The John Day River is the longest remaining free-flowing river in the Columbia River Basin, and as such contains the largest remaining entirely wild populations of summer steelhead and spring Chinook. Many other species of fish are found within the system, including introduced species (Table 27).

Land and water uses that have occurred in the John Day Basin over the last 130 years have significantly altered the fish habitats. For example, irrigation withdrawals, logging, livestock grazing and agricultural practices have resulted in higher stream temperatures. Warm water can be lethal to salmonids, but in the lower river reaches warmer temperatures have improved the environment for bass and catfish.

Presently there are several ongoing and proposed projects intended to increase anadromous fish spawning and rearing use in the John Day River Basin. The Izee Falls project proposes to open up over 80 miles of potential steelhead spawning and rearing habitat in the South Fork by creating passage around an existing block to upstream migration. This is a controversial project that will continue to receive substantial review and debate. In addition, some private and public lands are now being managed to improve conditions for fish while still being used for traditional purposes such as livestock grazing.

It is expected that continued improvement of the riparian and fish habitats along the John Day River along with improvement of downstream passage for smolts at dams on the Columbia River will result in increased numbers of wild fish returning to the river in future years. Some stretches of the river presently contain nearly ideal conditions for smallmouth bass and their population is expected to continue to increase in quantity and quality.

The resource assessment by the BLM concluded that, even considering habitat degradation, fish are outstandingly remarkable values for both the mainstem and South Fork John Day Wild and Scenic Rivers. The USFS found that, because of the high quality and importance of the fish habitat and the resident and anadromous fish populations in the North Fork John Day, the fish resources qualify as an outstandingly remarkable value. Fish also were identified as special attributes by OPRD in the

Table 27: Fish Species found in the John Day River System.

Native Species

Spring Chinook
Summer steelhead
Redband trout
Westslope cutthroat trout
Rainbow trout
Bull trout
Mountain whitefish
Mottled sculpin
Paiute sculpin
Shorthead sculpin
Redside shiner
Longnose dace
Speckled dace
Chiselmouth
Northern squawfish
Largescale sucker
Bridgelip sucker
Mountain sucker
Pacific lamprey
Brook lamprey

Introduced Species

Rainbow trout
Brook trout
Yellowstone cutthroat trout
Smallmouth bass
Channel catfish
Black bullhead
Brown bullhead
Carp

Source: John Day Basin Aquatic Habitat Management Plan Burns District BLM, April, 1985

Lower Mainstem John Day and the North, Middle and South Forks designated as State Scenic Waterways.

Wildlife

Numerous different vegetation types, geologic land forms and elevational zones throughout the John Day River Basin have resulted in a diversity of wildlife species. The vegetative diversity ranges from alpine species in the upper watershed to Douglas fir and ponderosa pine in the higher precipitation zones, to bitterbrush and needle-and-thread grass communities near the Columbia River in the lower elevations. In between are willow and alder communities in the riparian areas, along with sagebrush, juniper and grasslands in various combinations on the terraces and uplands.

This vegetative diversity is mixed in with a variety of land forms from mountains to deep basalt canyons to floodplains and meadowlands providing a wide variety of habitats. The species observed and the numbers of some animals change with the seasons. For example, some migratory birds occupy the area briefly, either moving on to summer habitats farther north or wintering areas in the south. Other migrants, such as mountain bluebirds, western tanagers and swallows spend half of the year within the region and then migrate south to Mexico or Central America for winter. Still others, such as goshawks, spend the winter in the area but migrate to higher elevations or latitudes for summer. Bald eagles also use the entire river basin as winter habitat from November through March. Primary uses are for foraging and night roosts. Most foraging occurs from Service Creek to Blue Mountain Hot Springs on the Mainstem, with the North Fork also receiving a lot of use. Carrion, fish, ground squirrels and waterfowl are utilized. The primary night roosts are the large cottonwoods on private lands and conifers located throughout the river corridor. Besides the bald eagle, there are other sensitive species in the basin (Table 28).

The listing of the spotted frog is indicative of the current, world-wide decline in some species of amphibians. Spotted frogs have been observed in the South Fork John Day Basin. Many species of birds live in the John Day basin year-round. The South Fork is home to one of the largest nesting concentrations of Lewis' woodpeckers in Oregon, taking advantage of the South Fork's mature ponderosa pine forests. Golden eagles and chukars also live in the basin throughout the year. Some species, such as Townsend's big-eared bat, occur at scattered locations throughout the river basin. Due to a number of factors, the population of Townsend's big-eared bats is down significantly.

The John Day River historically was home to a large population of California bighorn sheep. Since 1978, the ODFW and the BLM have reintroduced California bighorn sheep to several locations throughout the John Day Drainage. These populations are expanding as expected and one of the reintroduced populations is now used as reintroduction stock for other locations throughout the West.

Large ungulates such as mule deer, elk and antelope are common as year-round residents in the John Day River Basin. The Murderer's Creek Wildlife Management Area (WMA), originally established by the ODFW and the BLM to better manage the mule deer winter range, is now used by mule deer, elk, antelope and bighorn sheep year-round. Several thousand mule deer use the area during severe winters.

In its pristine condition the John Day River System contained many beaver colonies. Their structures were one of the factors which provided stability to the year-round streamflow.

The diversity of wildlife species in the John Day River Basin makes it one of the unique systems in Oregon. Wildlife was identified as outstandingly remarkable on both the South Fork and Mainstem John Day Wild and Scenic Rivers.

On the North Fork, the importance of the wildlife habitat and its resulting wildlife species diversity prompted the USFS to identify wildlife as an outstandingly remarkable value.

Wildlife also was identified as a special attribute by OPRD for the Lower Mainstem John Day and the North, Middle and South Forks designated as State Scenic Waterways.

Cultural Resources

The John Day River drains a large portion of the interior of the Blue Mountain Range and the Deschutes-Umatilla Plateau. As such, it encompasses a wide range of physiographic and environmental settings used by various peoples.

Archaeologic

Archaeological data from this vast region is limited. What is available is restricted primarily to the lower 100 miles. Several sites were formally excavated near the confluence of the John Day River with the Columbia River (Dumond and Minor 1983; Schalk 1987), but most of what we know about the archaeology of the river comes from an extensive inventory conducted by Polk (1976) along the lower Mainstem. Archaeological research along the remaining portions of the river is meager. This is due, in part, to the large percentage of river frontage in private ownership and the development which has taken place in those areas considered as high potential for prehistoric sites.

Table 28: Summary of threatened and endangered and candidate wildlife species, John Day River Basin.

Species	Classification
Bald eagle	Threatened
Peregrine falcon	Endangered
Western sagegrouse	C2 ⁽¹⁾
Long-billed curlew	C2
Spotted bat	C2
Townsend's Long-eared bat	C2
California bighorn sheep	C2
Northern goshawk	C2
Spotted frog	C2

(1) Candidates for Threatened or Endangered Status

However, limited archaeological data does provide some information about the various peoples who occupied this area. Prehistoric occupation of the region appears earliest near the Columbia River, dating back at least 10,000 years. Further up the river and in the upper reaches of the watershed, however, use and/or occupation may only have occurred in the last 5,000 years.

Ethnographically, there appear to have been two or three main users of the John Day River system. The primary and traditional aboriginal groups were the Sahaptian-speaking Tenino and the Numic-speaking Northern Paiute. Cayuse and Umatilla groups, both Sahaptian-speakers, also are known to have occupied a portion of the John Day River system, but much later in time and for a shorter duration than the Tenino or the Northern Paiute. Ethnographic villages are reported to have occurred near the mouth of the river and on the Middle Fork. The exact locations of these sites are unknown, but none appear to have occurred within the wild and scenic river corridors.

Pithouse villages are the most common prehistoric site type. They consist of depressions left from pits dug into the ground that had pole frames with mat or thatch coverings. Evidence of tool making, food preparation and shelter building is present on these sites. Rockshelters, or cave sites, also were used for short-term habitation, storage, or perhaps other unknown purposes. Campsites and spots where stone tools were made or repaired are present, as well as locations where plant foods were prepared. Numerous rock walls, cairns and pits in talus slopes occur along the river which may have served as hunting blinds or for other unknown purposes. Influences of the Columbia Plateau and Great Basin cultures are evident in the archaeological record.

Historic

The earliest evidence of historic use in the region dates to the 1840s with the Oregon Trail crossing. Settlement of the region began in earnest in the 1860s and was related to mining, homesteading and transportation.

Recorded historic sites on the John Day River center on the themes of homesteading, ranching, gold mining and transportation. The sites date from the late 19th through the early 20th centuries. The most common sites are wooden homestead or line cabins or their remains, along with associated features such as wells, outhouses, trash dumps and non-native trees. Corrals, fences, flumes, canals and farm equipment also are present on some sites.

Roads, packgrades and features associated with ferries and fords comprise the transportation sites. The Oregon Trail crossing at McDonald Ford located at RM 21 is the earliest and most famous historical site in the John Day River Basin. Segments of The Dalles Military Road occur within the river corridor between Clarno and Service Creek. Another unique site located near Horseshoe Bend at river mile 77 consists of the burned remnants of three wagons that were used in a 1928 film about the Oregon Trail. Finally, there is a cave along the John Day River that provides evidence of a "moonshine still" from the early 20th century.

About half of the known sites are in fair to poor condition with the greatest threat to these fragile resources being the continued illegal digging and surface collection of prehistoric and historic artifacts. Livestock trampling followed by recreational activities, farming, and erosion also have had an impact on cultural resources.

None of the cultural resource sites on the Mainstem John Day have been evaluated for their eligibility to the National Register. However, most are considered significant because of the overall lack of understanding of the regional prehistory, and to a lesser degree, the history. Cultural resources, both historic and prehistoric, are identified as outstandingly remarkable values on the John Day Mainstem Wild and Scenic River and potentially significant on the South Fork of the John Day Wild and Scenic River.

On the North Fork, the early settlers' pursuit of gold provides a rich history. Because of this the USFS found that the historic resources there have an outstandingly remarkable value.

The OPRD finds that both historic and pre-historic resources described above within the State Scenic Waterways are special attributes. For the remaining State Scenic Waterway segments not enough cultural information has been gathered for evaluation.

Water

Average annual precipitation in the John Day Basin ranges from less than ten inches in the lower elevations to fifty inches in the Strawberry Mountains. About 70 percent of annual precipitation occurs in the cooler months of November through May, mostly as snow. Less than 10 percent falls as rain during July and August. The average discharge of the John Day (measured at McDonald Ferry (McDonald) near Rock Creek (RM 21) for a period of 82 years (1904-87) was 2,103 cfs, or 1,524,000 acre-ft/yr. (USGS, 1990).

Stream discharge in the John Day Basin is marked by extreme variability in both timing and quantity. The peak instantaneous discharge at McDonald Ferry was 42,800 cfs on December 24, 1964. The river actually stopped flowing there in September, 1966, August and September, 1973 and August, 1977 (USGS, 1990).

The seasonal pattern of runoff has changed in the John Day River. Analysis of monthly discharges shows a trend of increased contributions to annual discharge during the months from October to February and decreasing contributions for March, April and July through September (WRD, 1986). During late summer and fall flows are so low that boating is impossible in most of the river system.

The frequency of peak flows also has changed. The number of peak flows exceeding 6,900 cfs (McDonald Ferry) was greater from 1980 to 1985 than for any other five-year period since 1948 when peak flows were first tabulated (WRD, 1986).

Geology

The John Day Basin has a complicated geologic history which has resulted in a complex and diverse assemblage of rocks. These rocks include masses of oceanic crust, marine sediments, a wide variety of volcanic materials, ancient river and lake deposits and recent river and landslide deposits. Distribution of the basin's major geologic units has largely been controlled by the structural evolution of the basin.

More than 65 million years ago, during pre-Tertiary time, sediments and volcanic rocks of the oceanic crust were contorted, uplifted and eroded. Roughly 54 to 37 million years ago, a series of widespread volcanic eruptions produced the lavas, mudflows and tuffs of the Clarno Formation. As this activity waned, new eruptions in the area of the present-day Cascade Range began depositing thick layers of volcanic ash which resulted in the John Day Formation. During a period approximately 19 to 12 million years ago, the region (along with much of Northern Oregon, Southern Washington and Western Idaho) experienced volcanic eruptions which resulted in a series of flood basalts known collectively as the Columbia River Basalt Group. Sometime after these basalt flows blanketed the region, fine-grained volcanic sediments of the Mascall Formation were deposited locally atop the basalts. Finally, the Rattlesnake Formation, a thick sequence of sand and gravel, was deposited in the ancestral John Day Valley. An east-west fault zone occurs along the base of the Aldrich Mountains and Strawberry Range. This fault zone, which includes the John Day fault, probably controls the location of the John Day River upstream of Picture Gorge.

Geology was identified as significant on the South Fork of the John Day Wild and Scenic River while the mainstem was found to have outstandingly remarkable geologic values.

The OPRD finds that geology is a special attribute from Tumwater Falls to Service Creek. No further evaluations of geology have been made by OPRD in the John Day Basin.

Minerals

Areas within the John Day River System have moderate potential for metallic and non-metallic minerals such as bentonite and zeolite, making continual exploration likely. The presently-known deposits of these are not currently economic but continued exploration could locate economic deposits. One of the largest mercury mines in the state is located within the basin.

Other minerals with development potential include gold, bentonite clay and sodium zeolites. There is low potential for gold along most parts of the mainstem, but some moderate potential does occur for placer gold, particularly along the North Fork where small placer mining operations are currently active.

Known deposits of other minerals are:

Pozzolan	Granite	Coal	Asbestos
Slate	Diatomite	Limestone	Nickel
Chromite	Antimony	Welded Tuff	

Energy

Federal oil and gas leases currently are in effect in the northern portion of the mainstem. In the past, nearly the entire river area was leased for oil and gas development and it is expected that applications will again be received for a significant portion of the area as existing leases expire. The majority of both oil and gas and any geothermal leases are issued with a "no surface occupancy"

stipulation which restricts disturbance within the area visible from the surface of the river. Oil and gas potential ranges from low in the eastern reaches of the basin to moderate in the northern portions.

There is a small area of geothermal resource potential along the North Fork at the eastern edge of the recreation management area. This is based on a few warm springs, but little exploration has taken place or is expected.

The entire John Day Basin has low potential for low grade coal. Production of coal is not expected to take place in the basin.

Prairie Wood Products in Prairie City constructed a biomass-fired cogeneration facility on its mill site. They use mill residue to generate 7.5 megawatts of energy.

Paleontology

Paleontological resources are known to occur throughout the middle reaches and along the South Fork of the John Day River System. These portions of the basin are considered some of the richest Tertiary (45-5 million years ago) plant and animal fossil localities in the world. However, only a few formally conducted inventories have been performed within or near these river corridors.

The John Day Fossil Beds National Monument, administered by the National Park Service, has three separate units interpreted. Two of these, Clarno and Sheep Rock, are located adjacent to the river. Only the Clarno Unit, however, occurs in close proximity to the Wild and Scenic River corridor.

Significant paleontological locations occur between Clarno and Service Creek, between Kimberly and Dayville and within the South Fork drainage. Paleontological values on both the mainstem and South Fork John Day Wild and Scenic Rivers have been determined to be outstandingly remarkable.

On the North Fork the USFS considered the paleontological resources in their assessment, but concluded that those values (at this time) do not qualify for outstandingly remarkable status.

The OPRD finds that paleontological resources found along the mainstem of the John Day from Tumwater Falls to Service Creek and along the South Fork are special attributes.

Recreation Setting

Unlike the neighboring Deschutes River, the John Day Basin offers more rustic and unconfined recreation opportunities as well as less technical rapids for the novice boater. Although many recreation opportunities can be found throughout the John Day River Basin, there are few recre-

ation developments. Recreational experiences range from easily accessible to extremely remote and from primitive to rural. A primitive experience can be found between Butte Creek and Cottonwood which is characterized by an essentially unmodified natural environment of fairly large size, low user evidence or interaction and minimal restrictions and controls.

At the other end of the spectrum, a rural setting, such as that found along the upper part of the South Fork, the lower portion of the North Fork and up river from Service Creek on the Mainstem, is distinguished by a natural environment that has been substantially modified by development of structures, vegetative manipulation or pastoral agricultural development. Sights and sounds of humans are readily evident and the interaction between users is at least moderate.

Recreation has been determined to be an outstandingly remarkable value on all wild and scenic segments of the John Day River. Recreation has been found to be a special attribute by OPRD along all segments of John Day State Scenic Waterways except the Middle Fork. These determinations are due to the diversity and quality of opportunities such as hunting, fishing, boating, camping, day use, wildlife observation, photography, hiking, swimming, and scenic viewing.

Wilderness

The upper reaches of the North Fork are designated as wilderness and are managed by the USFS. Five WSAs have been identified by the BLM on the lower John Day and South Fork. The canyonlands are the predominate land form for these WSAs. Each WSA was found to be natural in character and providing outstanding opportunities for solitude and primitive recreation.

The Aldrich Mountain WSA is located on the east side of the South Fork of the John Day River near Dayville and consists of 9,395 acres. The WSA is delineated on map 7g.

The Spring Basin WSA consists of 5,982 acres and is located south of Clarno on the main stem of the John Day River. The WSA is delineated on map 7d.

The North Pole Ridge WSA is located north of Clarno along the mainstem and consists of 6,369 acres. The boundary of the WSA is shown on map 7c. Further north along the main stem is Thirtymile WSA consisting of 7,538 acres and Lower John Day WSA consisting of 19,587 acres. The boundaries of these WSAs are shown on map 7a and 7b.

Final wilderness recommendations have been submitted to Congress for eventual Congressional action. Until the wilderness review process has been completed, these areas will be managed so as not to impair their suitability for preservation as wilderness. The management of the WSAs is discussed in detail in the BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review dated November 10, 1987.

C. Resource Uses

Agriculture

Agriculture has been and continues to be one of the most significant land uses in the basin. Hay is the most common commercial crop in the upper basin. These hay fields are located very near the river where they usually are irrigated with John Day River water. Wheat is the most common commercial crop in the lower basin. Hay is still grown along the river in the lower basin, but the number of acres devoted to hay are minor when compared to the number of acres of wheat grown on the plateaus near the John Day River.

Map 3 shows the breakdown of major land uses in the John Day Basin.

Grazing

The John Day River System includes portions of 56 grazing allotments including 10,821 Animal Unit Months (AUMs) of livestock use are authorized to 64 public land lessees. The categorizations of the allotments are 35 Improve (I), 10 Maintain (M), and 11 Custodial (C). (See Glossary for category definitions.) Livestock that use the river corridor are mainly cattle with some limited sheep use.

The areas along the river that are grazed by livestock are generally the lower portions of the slopes and flat areas next to the river. From Spray downriver, approximately 95 percent of the public land in the river corridor is subject to livestock grazing. From Spray upriver, approximately 85 to 90 percent of the river corridor is grazed sometime during the year.

Currently, livestock management designed to benefit riparian vegetation in the river corridor is limited to a few allotments. Most of the grazing occurs in the spring and summer months. Few livestock management facilities such as fences, corrals and water facilities exist in the river corridor. However, changes are being made in the grazing management which often call for grazing level adjustments, limiting the season of use, rotation grazing treatments and installing management facilities such as fences and water developments. Approximately 20 percent of the allotments along the river corridor have been evaluated. These evaluations recommend ending seasonal livestock grazing on pastures with river frontage or riparian values by May 1 each year. As future evaluations are done, changing grazing management to benefit riparian values will be implemented.

Forest Products

Forest products are the second greatest source of income after agriculture in the John Day River Basin. Almost all timber harvested within the system is cut into lumber at local mills. Products other than lumber are sources of income. These include Christmas trees, firewood, posts and poles, boughs and wild mushrooms.

Approximately 1.6 million acres of forest land within the system are classified as commercial. Commercial lands are suitable for and capable of producing sustainable levels of marketable timber.

Map 3: Land Use



MAP 3

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Land Use Prineville District

LEGEND

- Basin Boundary
- Agriculture
- Forest and Range
- Range
- National and State Recreation Areas

John Day River System

10 0 10 Miles



1993



About 200,000 acres of forest land within the system are classified as commercial-withdrawn. These lands are capable of producing marketable timber, but are protected from harvest. Stream and road side buffers, campgrounds, wilderness areas, research natural areas and areas of critical environmental concern are examples of commercially-withdrawn forest land.

The remaining forest lands are primarily classified as noncommercial. Noncommercial land is not capable of producing marketable timber on a sustained basis. Juniper woodlands comprise most of this acreage.

Approximately 60 percent of the commercial forest land and more than 67 percent of the potential merchantable timber volume in the system is in public ownership. Because these forests are located in remote areas away from existing and potential manufacturing sites and population centers, the potential for improved use of the forest resources is limited.

Mining

Mining has been an important use in the upper John Day Basin, especially on the Upper North and Middle Forks. Mining for gold, silver and other valuable minerals has occurred on some sites along the river for many years.

Mining activity for the remainder of the river system has been slight, except for the Horse Heaven mercury mine on the west side of the lower mainstem between Cherry Creek and Ashwood. There are several road rock material sites in those portions of the John Day Basin where there are highways or roads adjacent to the river. These material sites occasionally are used to acquire highway construction and maintenance material. Road rock is generally plentiful along the roaded sections, but demand is relatively low throughout the basin.

Recreation

Kinds of Use

The kinds of recreation use vary widely on the John Day River system due to the wide variations in the river flow, character and topography. The system is best known for its fishing and boating opportunities, but these activities are not available on all segments.

On the Mainstem John Day, boating is the most popular activity. In addition, camping, fishing for trout, steelhead and smallmouth bass, hunting for chukar, pheasant, geese, ducks and deer and viewing fossils in the John Day Fossil Beds National Monument are popular. Rafting, drift boating, canoeing and kayaking from Kimberly to Tumwater Falls is on the rise. The river system offers some whitewater opportunities with numerous class II rapids, four class III rapids and one class IV rapid. There is some motorized boat activity on the lower mainstem when flows exceed 1,000 cfs. The Mainstem between Clarno and Tumwater Falls is closed to motorized boats from May 1 to October 1. It is estimated that 50 percent of the boats used by noncommercial parties are rafts, 15 percent are drift boats and 35 percent are canoes and kayaks. Rafts and inflatable kayaks probably make up the majority of the boats used by commercial guides. Fishing is a major focus of most

commercial trips. Secondary activities associated with river running, fishing and hunting include relaxation, photography, wildlife viewing, swimming, general sightseeing and hiking. Upland hunting and camping usually require the use of four-wheel drive vehicles.

Within the counties that the John Day watershed covers there are 15,625 registered watercraft. Many of these and other registered watercraft from outside the area are used on the John Day system. According to the OMB's 1990 statewide survey of registered boat owners, there were over 6,000 days of motorized boat use on the John Day River. The bulk of this use was recorded in Sherman and Wasco County. A 1992 OMB survey contained more detailed information about the locations of motorized boat use on the river. The results of that survey are that there were 263 days at Cottonwood, 265 days at Service Creek, 288 days at Spray, and 9 days at Twickenham. These four locations are sites suitable for launching motorized boats.

The primary recreation activities on the South Fork are fishing for steelhead and resident trout, camping and scouting/hunting for deer and elk.

On the North Fork, fishing for trout and steelhead and hunting for deer, elk and upland game birds occur. Some boating occurs on the North Fork from March through June and this activity appears to be gaining in popularity. Camping often is associated with all of these activities.

Seasons of Use

The amount of flow in the river system varies seasonally and from year to year, primarily depending on the snow depth in the mountains and irrigation withdrawals. There are no dams controlling water flow. The mainstem from Kimberly to Tumwater Falls potentially can be floated during most of the year, but cold winters and low summer and fall flows discourage most boaters. Canoes and inflatable kayaks can be used during low water flows, but rafts and drift boats can be used only during the high water season from February through June. The main boating season on the lower river is from mid-April to the end of June with Memorial Day weekend receiving the highest use during this period. Most of the river is too low for boating in August, September and early October.

The North Fork provides a very short season for floating, usually from late April to mid-June. The South Fork does not have a boating season except for day use in some of the deeper holes. A few attempts have been made to float the Middle Fork, but it is not boated regularly because of low flows and limited access.

Bank fishing for trout occurs from May through October and from November through March for steelhead. Bass fishing occurs primarily during the warm summer months.

On the Mainstem, hunting seasons extend from September to mid-January for waterfowl and upland birds and from October through November for deer and elk. Hunting for deer and elk occurs in September, October and November on the North and South Forks.

Amounts of Use

1. Visitation Estimates

Actual numbers of boaters using the John Day River have not been collected in recent years. However, estimates based upon observations by BLM river patrol and car counts at key river access points show an increasing trend in recent years, with a substantial increase in boating in the 1993 boating season. See Table 29.

An estimated 6,554 boating visitor use days occurred between Service Creek and Cottonwood Bridge from mid-April to mid-July of 1984. This estimate is based upon data gathered from four camera counters placed on the river. Besides recording use levels, the cameras identified the types of floating crafts used.

ODFW estimated total angler visitor use days to be approximately 31,500 in 1987 for the entire John Day River System. Hunting for chukars, grouse, other upland game birds, geese, ducks, deer and elk accounted for approximately 58,500 hunter visitor use days in 1987. The same study concluded that there were 7,500 visitor use days for sightseeing, hiking and photography and over 500 visitor days for swimming and other day use activities.

Visitor use days for fishing on the Mainstem from Dayville to Tumwater Falls were estimated by ODFW at 13,500 in 1987 and 15,000 in 1992. On the North Fork, ODFW surveys listed trout fishing

Table 29: Vehicle Counts ¹⁾ on Lower John Day River 1992-93

Year	Month	Total # Vehicles		Est. Total # People ²⁾		Est. Total Visitor Days ³⁾	
		Clarno	Cottonwood	Clarno	Cottonwood	Clarno	Cottonwood
1992	May	182	388	491	1048	1473	3144
	June	165	486	446	1312	1338	3936
	July	No data	666	—	1798	—	5394
	Aug.	No data	843	—	2276	—	6828
	Sept.	No data	547	—	1477	—	4431
	Oct.	155	No data	419	—	1256	—
1993	June	No data	473	—	1277	—	3831
	July	4291	1775	11586	4793	34758	14379

1) Calculated by Oregon State Parks from automated vehicle counting devices, Cottonwood = J.S. Burres State Park

2) Based on an average of 2.7 persons per vehicle; Visitor Day = one visit to public lands by one individual within a 24 hour period.

3) Assuming an average 3-day length of stay.

visitor use days at 12,000. They estimated that the South Fork from Izee Falls to Dayville and the Middle Fork had approximately 3,000 angler visitor use days in 1987.

Personal contacts made by BLM in June-September, 1991 on the South Fork revealed that many people (39%) spent the summer scouting for animals to hunt later in the fall. Fishing (32%) and swimming (19%) also were important activities. About 10% of the visitors were hunting during the survey period. Camping was an activity associated with these other activities for 10% of the people contacted. Vehicle counts on the South Fork during the four month period indicated that there were approximately 3,000 visitor use days.

In 1990 and 1991 there were 25 commercial guide permits issued for the John Day River. However, the number of permitted commercial outfitters actually guiding on the river was only 12 in 1990 and 13 in 1991. In 1991 the BLM implemented a requirement that permittees must show some use on the river within a two year period or their permits would be revoked.

In 1992 there were 24 permits issued for the John Day River and 18 of those guides reported using the river commercially.

2. Length of Stay

The length of stay for recreationists varies with the type of activity engaged in, and in the case of boaters, the number of river miles covered as they relate to the river's rate of flow. The length of stay of hunters generally depends on the success or the opportunity for success of the hunt. Overall, the length of stay for a group on any given stretch of the John Day averages 2.8 days based upon sample observations and interviews.

From Service Creek to Clarno (37 miles), it is estimated that the length of stay varies from one day for bank angling to two or three days for a float trip to four or more days for a hunting trip stationed at one location.

From Dayville to Service Creek where the highway follows the river, the length of stay varies from one day for fishing or other day use activities to a two to three day camping trip.

On the North Fork, between Camas Creek and Monument, a float trip can take from two to three days depending on water flow and length of trip. A float trip from Monument to Kimberly can be done in one day. Hunting trips vary from one to five days along the North Fork.

The South Fork provides day use fishing and longer stays for camping and hunting during the summer and fall months. No data have been collected for length of stay on the South Fork, but it is estimated that people stay from one to three days.

All the river segments have some form of day use such as swimming, inner tubing, picnicking and general sightseeing.

Table 30: Types of Watercraft on John Day River by Month & Year, 1984, 1988-92.

Year	Month	Percent Watercraft Observed			# of Observations
		Large	Small	Motor	
1984	Total (May-June)	67	33	0	97
	May	80	20	0	29
	June	60	40	0	60
	July	*45	*55	*0	*8
1988	Total (May-June)	64	36	0	26
	May	*80	*20	*0	*18
	June	*35	*65	*0	*8
1989	Total (May-June)	64	35	1	138
	May	65	35	0	43
	June	67	30	3	61
	July	40	53	7	31
1990	Total (May-Oct)	52	47	1	133
	May	63	37	0	40
	June	47	52	1	62
	July	*0	*0	*0	*3
	August	0	*100	*0	*2
	September	*50	*50	*0	*12
	October	*0	*0	*0	*14
1991	Total (May-October)	76	24	0	127
	May	96	*4	*0	*7
	June	70	*30	*0	*16
	July	48	52	0	48
	August	83	17	0	36
	September	40	*60	*0	*20
1992	Total (May only)	*100	*0	*0	*4
	May	*100	*0	*0	*4

* = Sample size too small to be valid.

¹ Large crafts are nonmotorized boats that are designed to comfortably hold more than two people such as rafts and driftboats.

² Small crafts are nonmotorized boats that are designed to comfortably hold two or less people such as canoes, kayaks, inflatable kayaks.

3. Group Size

Group size can affect campsite conditions and a visitor's experience. This is especially true if the campsite is too small to properly handle a large group or if too many large groups are camped too close together. Group size also can affect boat launching. Large groups who occupy the launch area for extended periods may adversely impact the experience of others. Group size in the John Day River System varies greatly depending on the type of activity occurring and the season of use. Average group size on the John Day is 6.2.

Day is about 6.2 people, with an indicated declining trend between 1984 and 1992. Commercial rafting group sizes vary from five to 16 people with an average of eight people per party. The special recreation permits issued by the BLM for commercial boating use stipulate that the maximum party size is 16.

Observations between Service Creek and Cottonwood during the summers (1984-1991) indicated that 64% of the watercraft were large (raft and drift boats), while 35% were small (canoes and kayaks). Motorboats comprised one percent of the total (Table 30).

Origins of Use

Surveys taken by the BLM during the heavy river use months (April to June) in 1986 through 1992 found that 78 percent of the people using the river came from Oregon, 17 percent from Washington, 2 percent from California, and 3 percent from other states and countries. Of those respondents who claimed their primary residence as Oregon, 35 percent were from central and eastern Oregon, 28 percent from Portland, 35 percent from various locations in the Willamette Valley and 2 percent from southwestern Oregon.

During the 1987 and 1988 winter fishing season for summer steelhead (November through March), the ODFW conducted a survey to identify the origin of anglers. Results are shown in Table 31.

Native American Interests

Most of the John Day River System is within the ceded lands of the Confederated Tribes of the Warm Springs Reservation, a coalition of Tenino, Wasco and Northern Paiute Native Americans. Information on contemporary use of the river by these Native Americans is limited. There is no recent evidence of traditional uses such as fishing or plant gathering on the river. There is also no

Table 31: Origin of Steelhead Anglers, John Day River, November through March 1987-88 (ODFW)

John Day Basin	46%	Southeast Oregon	4%
Northeast Oregon	31%	West of Cascades	2%
Central Oregon	14%	Out of State	3%

Personal contacts on the South Fork (June-September, 1991) showed that 93% of those visitors were from Oregon, 5% from Washington and 2% were from California and Idaho. Many of the Oregon visitors were from the Willamette Valley.

known traditional religious site along the river. However, recent discoveries and second-hand information reveal that Native American religious practices are being performed at certain locations adjacent to the river corridor, although the cultural affiliation of the responsible individual(s) is unknown.

Utility Corridors

Six electric powerlines cross the main stem of the John Day River (see map 4). A Pacific Power and Light Company 69-KV line crosses the river approximately one and one-half miles downstream from McDonald Ford (RM 19). The Bonneville Power Administration (BPA) McNary-Maupin 230-KV steel tower line No. 2 and the Slatt-Marion 500-KV double circuit line cross the river between Scott Canyon and Rock Creek (RM 23). The Columbia Basin Electric Cooperative 23-KV line crosses the river between Scott Canyon and Hay Creek (RM 28). The BPA DeMoss-Fossil 115-KV wood pole line crosses the river at Cottonwood Canyon (RM 40). The Columbia Power Cooperative 69-KV line crosses the river south of Clarno near Pine Creek between RM 110-111.

It is possible that the second line crossing the John Day River at RM 23 will be rebuilt to higher capacity. The entire utility corridor then would be expanded to accommodate additional higher capacity lines. Also, according to BPA, long-range energy requirement projections indicate a high-capacity east-west corridor may be needed which would cross the John Day River between the town of Clarno and a point 20 air miles north of Clarno. All utility corridor actions will be subject to State Scenic Waterways and National Wild and Scenic Act restrictions and other legislation.

If the utility lines are expanded as discussed above, then the number and size of the lines in the corridors will increase and the crossings would be more visible to boaters as intrusions on the natural scene.

Two pipelines belonging to the Pacific Gas Transmission Company cross beneath the river upstream from Thirtymile Creek at approximately RM 85. Map 4 shows the existing pipelines and powerlines.

Water Rights

Since the early 1860s, water in The John Day River System has been appropriated and water right certifications have been assigned. Although about 4,500 rights have been established for 6,200 cubic feet/second (cfs) flow, approximately 800 have been canceled covering about 3,600 cfs. Table 32 shows current rights by cfs and the benefitting use by subbasin (OWRD, 1986).

Within the basin, total diversions account for approximately 76 percent of the John Day System total discharge. This discharge is about 2,063 cfs or 1,524,000 acre-feet per year (one acre-foot equals 43,560 square feet one foot deep). However, due to extreme seasonal fluctuations in runoff on many streams, there is often not enough streamflow in late summer to satisfy all water rights.

For rafting and drift boating, approximately 1,000 cfs is needed to float safely over the many broad gravel bars. Two thousand to 4,000 cfs is considered to be the ideal flow for boating. For canoes,



MAP 4

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Existing & Proposed Pipelines & Powerlines

Prineville District

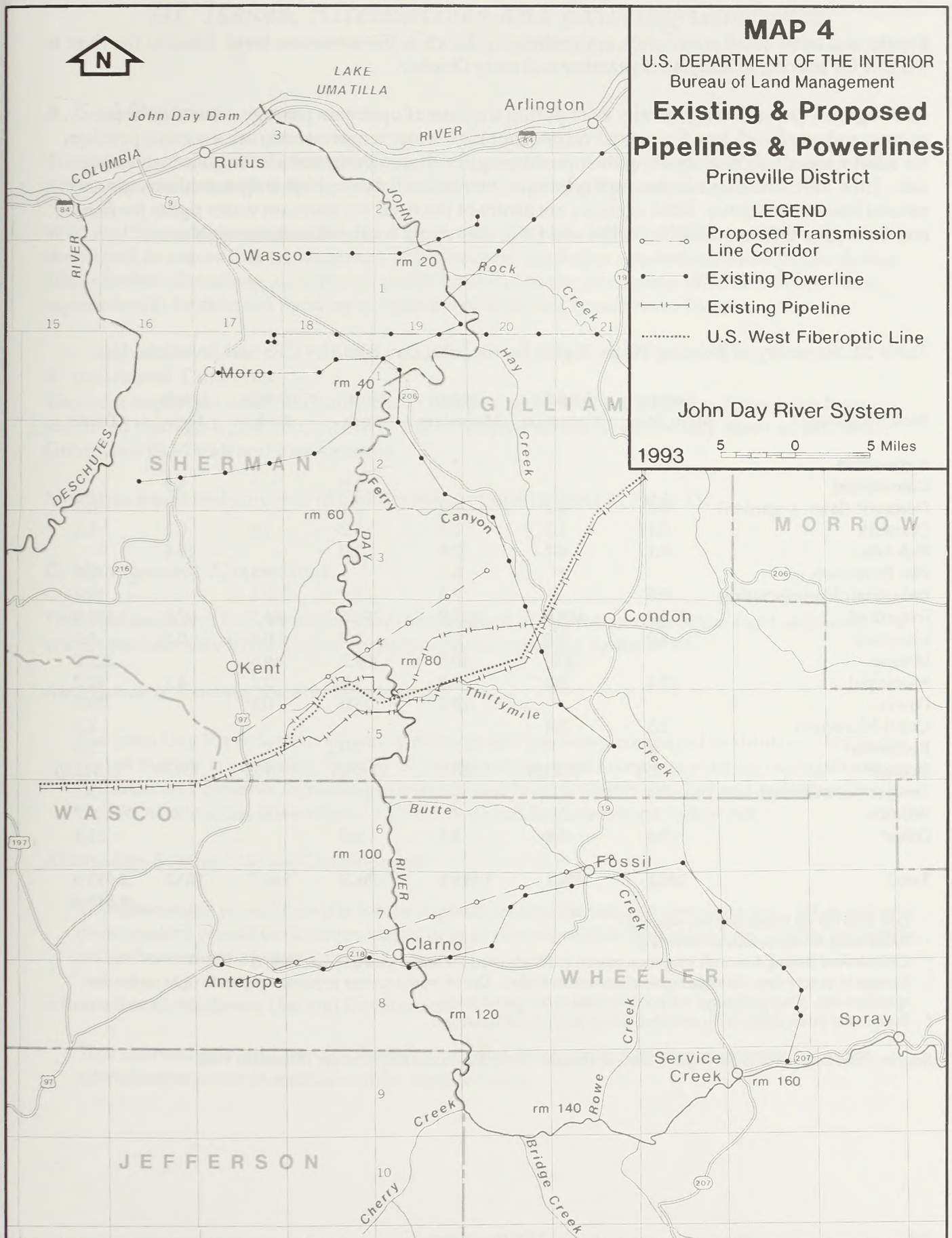
LEGEND

- Proposed Transmission Line Corridor
- Existing Powerline
- Existing Pipeline
- U.S. West Fiberoptic Line

John Day River System

1993

5 0 5 Miles



kayaks and other small water craft, approximately 500 cfs is the minimum level. Most of the river is too low for boating in August, September and early October.

Although adequate flows generally exist during the time of upstream passage of anadromous salmon and steelhead, low flows (and consequent high water temperatures) are a serious problem for adult Chinook that are holding their positions prior to spawning and also for rearing juvenile fish. Flow deficiencies occur during the late summer and fall due to high irrigation demands and natural low stream flows. State agencies are aware of the need for instream water rights for fish and through a 1987 law OPRD, ODFW and DEQ may apply for these instream rights.

Table 32: Summary of Existing Water Rights for the John Day Basin by CFS and Beneficial Use

Beneficial Use	Lower Main Stem	Middle Mainstem	Upper Mainstem	North Fork	Middle Fork	South Fork	Total ¹
Agriculture			*				*
Commercial				3.7		3.7	
Domestic (lawn & garden)	0.2	0.2	0.2	0.1	*		0.7
Domestic	0.1	1.3	1.6	1.2	1.8	0.1	6.1
Fish Life	0.1	0.7	12.8	2.0		15.6	
Fire Protection		*	0.2		0.1		0.3
Industrial/Manufacturing	0.8		7.3	2.1	2.2		12.4
Irrigation ²	229.0	495.5	927.0	291.5	88.5	97.5	2,129.0
Livestock	4.0	0.6	0.9	1.7	0.8	0.3	8.3
Mining		30.8	40.5	202.2	49.5		323.0
Municipal	15.4	5.4	9.3	3.9	3.1	5.1	42.2
Power			13.9	25.0	0.8		39.7
Quasi-Municipal	2.5	2.8					5.3
Recreation	.2		*	2.0	*		2.3
Storage ³	(129)	(5,215)	(681)	(1,898)	(82)	(377)	(8,382.0)
Temperature Control	3.3						3.3
Wildlife		*	*				*
Other ⁴	9.6	6.8	4.3	0.7			21.4
Total¹	265.2	544.1	1,018.1	536.1	146.7	103.0	2,613.0 (1,549.0)

* Less than 0.1 cfs (cubic feet per second).

¹ Totals may not agree due to rounding

² CFS allowed during 6-month irrigation season (CFS adjusted for entire year in parenthesis)

³ Storage is in acre-feet. Storage rights allow no diversion. Use of stored waters requires a separate right under the specified use. Storage figures are not included in the grand totals.

⁴ Represents those rights with uncoded use in provisional database.

Source: John Day River Basin Report, State of Oregon, Water Resources Department, November 1986.

III. Issues, Alternatives and Existing Guidance

A. Goal Statement

The goal is to manage the resources along the river so as to provide compatible public recreation activities in concert with existing land uses without impairing the natural values.

Wild and Scenic River plans will be in concert with this plan, but separate documents will be developed to ensure that management activities meet legislative requirements and public desires. Major surface-disturbing activities on public land within the designated Wild and Scenic River segments will be deferred pending completion of Wild and Scenic River plans.

B. Issues and Concerns

The most important issues and concerns in the management of the John Day River have been identified through legislation, extensive public scoping efforts, the John Day River ad hoc Study Group and BLM staff and management.

Identified issues and concerns fall within three groups as listed in Table 33.

C. Management Alternatives

This plan considers five alternatives for management of recreation uses of the eight segments within the John Day River System containing lands managed by the BLM.

Alternative A. Existing Use and Development

The John Day River System generally receives low use when compared to similar rivers in the region but use is increasing rapidly. This alternative would continue existing management direction and preserve increasing use trends and level of visitor services and facilities. This is the No Action alternative required by the National Environmental Policy Act.

Alternative B. More Use and Development

This alternative would provide for the highest reasonable use and development. High use and development would be accommodated only to the extent that they would not inhibit protection and enhancement of river values.

Alternative C. Moderate Use and Development

This alternative would provide limits on use and development to assure uncrowded recreational experiences in natural and/or rural settings.

Table 33: Issues and Concerns Discussed in this Plan

Issue or Concern	Where Discussed		
	IIID*	IIIE*	IVA*
A. Protection and Enhancement of Resource Values			
1. Wild and Scenic River Boundaries	X		
2. Scenic Quality			X
3. Fire Management			X
4. Weed Control			X
5. Fish Habitat		X	
6. Wildlife Habitat		X	X
7. Water Quality and Quantity		X	X
8. Riparian Vegetation		X	X
9. Cultural Resources		X	X
10. Paleontological Resources		X	X
B. Types and Levels of Recreational Use			
1. Boating Use Limits	X		
2. Boating Use Allocation	X		X
3. Motorized Boating	X		X
4. Non-Motorized Boating			X
5. Guided and Outfitted Services	X		X
6. Public Access	X		X
7. Camping			X
8. Fishing and Hunting		X	
C. Public Services			
1. Visitor Facilities	X		
2. Information and Education	X		
3. Emergency Services			X
4. Law Enforcement			X
5. Trespass			X
6. Utility Corridors		X	X

* IIID = Issues Addressed by This Plan

* IIIE = Issues Addressed by Other Plans

* IVA = Management Common To All Alternatives and Segments

Alternative D. Low Use and Development

This alternative would restrict use and development to existing or lower levels than are now occurring. It also represents the lowest reasonable use and development for a river segment. It provides the most solitude in a primitive or wilderness setting.

Alternative E. Preferred

This alternative is constructed from preferred parts of the other four. It would keep use low in two segments (2 and 7), allow moderate use in two segments (1 and 3) and allow more use in four segments (4, 6, 10 and 11).

D. Issues Addressed by this Plan

Issues With Alternatives

This draft plan identifies alternative ways of resolving the following issues:

Wild and Scenic River Boundaries

- Issue Described

An Act of Congress set the terminal boundaries (beginning and ending points) of the designated Wild and Scenic segments of the John Day River. However, the Act directed the BLM to establish lateral boundaries. The Act requires that acreage within the boundary not exceed an average of 320 acres per river mile. This is an average width of one-quarter mile on each side of the river.

- Alternatives

Wild and Scenic boundary locations may vary in any portion of the river. The boundary may be placed well beyond one-quarter mile in some areas, or placed at the mean high water line on the river bank in others. While private lands may be included in the boundary, BLM has no zoning or regulatory authority over management of these lands.

Boating Use Limits

- Issue Described

After fishing, boating is the most popular recreational activity on the John Day River. Float trips, both commercial and noncommercial, occur on about half of the river system from March to July when water flows are high enough to support such activity. The rivers' usually uncrowded conditions, outstanding scenery and good fishing have attracted many people. The number of boaters appears to be growing at a much faster rate on the John Day than on other

ivers in the region. Negative impacts are occurring from recreational uses, and this is cause for concern for the protection of the natural and cultural values.

Boating use limits will be imposed on any river segment where identified resource values are or may be adversely affected as a result of excessive boating use. Limiting boat numbers does not appear to be an immediate need on any segment of the John Day River System. The highest use occurs on Memorial Day weekend, especially in segments 2 and 3, between Service Creek to Cottonwood Bridge.

It is the BLM's policy to manage recreation use, including boating use, through voluntary or indirect means such as public information and interpretation rather than direct limited entry systems.

If and when a limited entry system becomes necessary, the allocation method would be developed through a public planning process and implemented at that time.

- Alternatives

The Existing Use and Development alternative would not limit use. Boating use levels would increase or decrease based solely on public demand.

The More Use and Development alternative would establish the upper limits on boating use. In some segments, this upper limit would be based upon full use of the maximum number of campsites available. In other segments it may be based on a percentage of use above existing use levels.

The Moderate Use and Development alternative would provide for more overall use than presently exists, but less than in the More Use and Development alternative. Use limits may be based upon numbers of available campsites or a percentage of use above existing use levels.

The Low Use and Development alternative would limit boating to the lowest reasonable numbers. These use limits also would be based upon either the numbers of available campsites or a percentage of use above existing use levels.

The number of boaters represented by these alternatives would be revised whenever ecological conditions such as riparian vegetation and campsite conditions indicate changes in use limits are warranted. This would be conducted with public notification and involvement in the decision process.

Boating Use Allocation

- Issue Described

If boating use is limited in any river segment, then a fair method to allocate the use between private and commercial boaters must be applied. Currently, there are four basic methods of

allocating use on rivers nationally. All are highly controversial. The method selected will apply to all river segments where use limits are imposed.

- **Alternatives**

Any method of allocating boating use will be based upon one of these methods, or a combination of them.

Historical Use Method:

This method examines historical use patterns to determine how use among user groups has been split in the past. This historic split is then carried forward into the future. Compared to other allocation systems, historic use may result in the least amount of dislocation for user groups because it recognizes past and existing use patterns. Increases or decreases in use levels are shared by each user

group proportionately. One of its primary disadvantages is that it freezes use allocations at a point in time and may not take into account changing conditions or patterns of use by user groups.

Even Split Method:

This method evenly splits the amount of permits available between the various user groups. For example, use might be split 50-50 between commercial and noncommercial users.

Although this method splits the amount of permits available down the "middle," it has the potential to dislocate user groups who have historically had more than a 50% share of the use and is unresponsive to changes in the size of the user groups over time. The arbitrariness of the split may also cause groups to view the allocation as "unfair".

Total Common Pool:

Under the total common pool, or the so-called freedom of choice method, each boater has the same chance of obtaining a permit. If the person obtains a permit, he or she can then choose whether or not to hire a guide. The total common pool method does not give a "slice of the pie" to any group. The amount of use each group ends up with depends on the marketplace and the degree to which the rationing system can meet the varied needs of different users. Theoretically, under this allocation method either guided or non-guided users could end up receiving from 0% to 100% of the river use opportunities. The disadvantage to this method is that it is experimental, having been implemented only on one river for a short period of time. Costs in time, money and personnel to implement the total common pool method may be prohibitive.

Combination Method:

A combination of allocation methods might be used to fit the particular circumstances of a river system. For example, historical use data might be employed to allocate a percentage of river

usage to each user group. Another portion of the use might then be allocated among boaters using the total common pool (freedom of choice) or an even split method. Many allocation systems on rivers have evolved to use a combination of techniques, tools and methods driven by the needs and demands of the user population. The combination method usually consists of features designed to:

- meet diverse user needs,
- respond to changing user populations,
- incur reasonable administrative costs through batch and group processing, and
- be fair to all users.

Motorized Boating

• Issue Described

A motorized boat is a boat propelled by any form or size of motor. The most controversial form of motorized boating is "jet boating" where the boat is propelled by a jet rather than a propeller. The absence of a propeller allows some jet boats to operate in as little as four inches of water. This mobility has allowed jet boats to easily and quickly move into areas that were previously inaccessible or has extended seasons of boating use into periods of low water flows.

Motorized boating management is one of the most controversial issues in this plan. People who favor or oppose motorized boating often have intense feelings on the subject, which they readily share.

People who oppose motorized boating argue that, especially in low flow conditions, such boats can be dangerous for the operator or others, that they accelerate stream bank erosion, which includes adverse impact to shoreline cultural resource sites, impair fish spawning, disturb wildlife, complicate law enforcement and destroy the solitude of non-motorized boaters and other recreationists.

People who favor motorized boating argue that such activity is a legitimate recreational activity that makes the river more accessible to handicapped and elderly people and people who have a limited time to spend on the river. They feel that they have been banned from too many waterways already and their freedom is impaired for weak and unsubstantiated reasons. They say that there is no conclusive evidence that motorized boating causes environmental harm, and people who feel their solitude is destroyed by these boats are selfish and overreacting.

There are both social and environmental impacts from motorized boating. These impacts have long been debated but little scientific information exists on this subject. Social impacts are the most difficult to measure and reactions to motorized boating will vary by individuals and by groups.

A survey conducted by the OPRD during the rafting seasons of 1983 and 1984 indicated that 67% of the users contacted on the John Day River believed that powerboat use should be prohibited on that river. The destruction of solitude, especially on the lower river, was the primary reason given for these opinions. It is important to note however, that the vast majority of these respondents were not using motorized boats when surveyed. Motorized boats are prohibited by OMB between Clarno and Tumwater Falls from May 1 to October 1.

Environmental impacts of motorized boating also are difficult to measure. Very few scientific studies have been conducted on this subject. Those consequences can be affected by such variables as water levels, stream structure, bank soil types and fish species involved. These variables make research especially difficult and expensive. And when a study is concluded, the results may not be applicable to another river or even another segment of the same river.

The environmental impacts of motorized boating have not been specifically studied on the John Day River. Therefore, professional biologists who work on the river must be relied upon to provide the best available information on the environmental consequences of motorized boating. The biologists who have spent the most time on the river in the recent past are ODF&W and BLM biologists. Their concerns are as follows:

1. Wave action caused by jet boats causes streambank erosion, resulting in loss of riparian soil and vegetation. Water quality is thereby degraded, and stabilization of the banks is impaired. This is a serious problem for the Lower John Day.
2. The spawning success of smallmouth bass is endangered by the use of motorboats. This results from disturbances of the eggs by wave action, making them more vulnerable to predators. Also, the bank soil washed into the river by motorboat wave action covers the eggs and reduces their supply of oxygen.
3. Feeding behavior of fish in the shoal areas is affected adversely by the wave action.
4. Waterfowl and river-related animals such as the river otter are adversely affected by the noise of motors, and are more subject to poaching by motorized boating. Feeding, breeding and other activities are disturbed. The production of ducks and geese also is thought to be reduced by this disturbance.

• Alternatives

Alternatives for motorized boating management vary from no limitations in the More Use alternative to prohibition in the Low Use alternative. The Existing Use alternative would keep existing rules and allow motorized boating to increase or decrease according to public demand. The Moderate Use alternative would allow some motorized boating, but some restrictions would be imposed such as a limited season of use, limits on which days they could be used or limits on the numbers of motorized boats operating in a given period of time.

Guided and Outfitted Services

- Issue Described

There are presently no limitations on the number of guided or outfitted services on the John Day River System. BLM guide permits are obligatory, but there are no training or experience requirements. Guides are required to complete and sign for a Special Recreation Permit, to show a certificate of insurance that meets or exceeds federal requirements and to provide a copy of their OMB Guide Registration and other supplemental information. BLM permits are issued with a guideline handbook and special stipulations to be followed by the permittee.

Many existing guides and outfitters feel that the BLM should place a cap on the number of new guides allowed to get permits to help insure enough business to support existing businesses. Any decision to limit boating use, including limits on the number of authorized guides, will fully consider the recreation availability, economic and other ramifications of that decision.

Some guides are operating on the John Day without permits, and some are operating in violation of their permit stipulations. The safety of their clients is cause for concern. There also is concern that some guides may be taking large numbers of clients, thereby negatively impacting campgrounds and creating social conflicts.

- Alternatives

The More, Moderate and Existing Use and Development alternatives would not limit the number of guides and outfitters in the short-term. All guides and outfitters utilizing BLM lands would be required to obtain a permit. Group size would be limited to 16 people per party. There would be no limit on the number of groups per day.

The Low Use and Development alternative would limit the number of guides and outfitters. (See Boating Use Allocation.) Group size would be limited to 12 people per party per day.

Public Access

- Issue Described

Some river segments have extremely limited public access. Some people want access in these places situations improved to allow more public use. Others want access to remain limited to reduce adverse impact from increased public use.

There is much public land in the John Day River System, and where it is available, public access to these lands varies from paved highway to primitive trail. In some segments, public land is surrounded by private land so there is no legal public access.

Public access has been the strongest concern voiced by the public during the planning process.

- Alternatives

The Existing Use and Development alternative would maintain access at existing levels. Public access would not be expanded or reduced.

The More Use and Development alternative would provide for maximum reasonable public access by roads and trails. Access would be through public land where possible. Access needed through private land would be achieved through acquisition of easements, preferably through agreements with willing landowners.

The Moderate Use and Development alternative would provide for increased public access but access into some areas would be limited. Easements through private land would be acquired from willing landowners.

The Low Use and Development alternative would reduce public access by roads and trails. This means that access would normally be restricted to the beginning and ending of a river segment. Public access to the public lands in between the beginning and ending points of each river segment would be by boat or trail.

Visitor Facilities

- Issue Described

The nature and extent of facilities such as toilets, boat launches, garbage cans, tables and signs are the subject of much concern and debate. Facilities are expensive to build and more expensive to maintain. Such facilities enhance the experience of some visitors and degrade the experience of others. In addition to affecting visitor experience, some facilities are necessary for protection of resource values.

Another concern is that facilities often provide an unintended attraction which increases visitation.

The managing agency must decide which facilities are the minimum necessary to provide for visitor safety and enjoyment, and still provide for environmental protection.

- Alternatives

Alternatives for facility development vary from none to many facilities in some areas. The level of facility development will depend upon the need for resource protection and the desired experience setting to be achieved in a given area. For example, few facilities would be provided in a primitive setting while many might be provided in an area that has a roaded and rural setting.

The composition of facilities provided will depend upon the needs of the specific area.

The most facilities are proposed in the More Use and Development Alternative and the fewest are proposed in the Low Use and Development Alternative.

Information and Education

- Issue Described

Presently there are few public information sources for the John Day River System. Two BLM maps are available. These 1:100,000 scale maps show public and private roads, topography, location of launch sites and land ownership. A small general information pamphlet is available from the BLM covering river use and camping along approximately 107 miles of the John Day River from Service Creek to Cottonwood Bridge. A book titled "John Day River Drift and Historical Guide" by Arthur Campbell, sold at local bookstores, provides information on floating the river and includes a colorful history of the area.

There is increasing public demand and a recognized need for more visitor information, education and interpretation about the John Day River System. Particularly, recreationists need to know land status, public river access points, and other information to help facilitate a safe and enjoyable recreation experience.

Visitor information, education and interpretation also is needed to increase resource protection and enhance a positive agency image.

The appropriate level of information, education and interpretation needed on any given river segment must be determined. The most efficient and effective means of providing this information also must be decided.

- Alternatives

The More Use and Development Alternative provides for a maximum level of visitor information and education which includes interpretive signing, information boards, increased visitor contact with uniformed personnel, brochures, maps, and campfire programs. Presentations to schools and interest groups may also be conducted. The Low Use and Development Alternative proposes the minimum level of visitor information and education for all river segments and is described in Part IV, Management Common to All Alternatives.

Issues Without Alternatives

The following issues, addressed all or in part by this plan do not have alternative methods of being resolved. Proposed management actions are described in Part IV, Management Common to All Alternatives.

- a. Emergency Services
- b. Law Enforcement
- c. Trespass
- d. Water Quality and Quantity

- e. Fire Management
- f. Weed Control
- g. Scenic Quality
- h. Camping

E. Issues Addressed by Other Plans

Introduction

Management direction and decisions for the following issues have been addressed in documents prior to the development of this plan. These plans meet the Wild and Scenic River planning requirements of protecting and enhancing certain outstandingly remarkable values as well as meeting other legal standards. The purpose of these existing plans is to protect and enhance the resources for which they were written. They were developed with full public involvement and will continue to be the decision documents providing management direction for the specific resources addressed. Added emphasis will be placed on their review and implementation on Wild and Scenic segments of the John Day River System. Existing plans will be modified and revised as needed.

Fishing and Hunting

Issue Described

Fishing and hunting are the most popular recreation activities in the basin. The numbers of people participating in these activities has grown so much that restrictions have been imposed on the fishing and hunting seasons, number of fish or animals taken and kind of equipment used. The nature and extent of these restrictions are of the utmost interest and importance to these large user groups.

Existing Guidance

Fishing and hunting in Oregon are managed by the ODFW. Documents developed by this agency provide information on fishing and hunting restrictions.

The public lands under BLM management provide fish and wildlife habitat and a place for public fishing and hunting to occur.

Fish Habitat

Issue Described

Fish have been identified as an outstandingly remarkable value on the Wild and Scenic segments of the John Day River System. This is so despite the fact that populations of native salmonids have dropped to small fractions of their historic levels. Because of the critical situation for anadromous fish in the larger Columbia River System, the remnant runs of wild Spring Chinook and summer steelhead in the John Day are of crucial importance for the future. One of

the primary reasons for the drop in populations of these fish is the degraded condition of their habitats.

Starting in the upper watersheds and continuing throughout the drainage, the habitat problems include:

- sedimentation of the spawning beds and rearing areas due to mining activities and inappropriate logging practices, road construction and grazing of livestock,
- reduced streamflow due to irrigation withdrawals and removal of riparian vegetation by logging and grazing and
- increased water temperatures due to reduced streamflows and removal of bank vegetation.

Existing Guidance

The BLM will continue cooperative efforts with landowners and other agencies to improve fisheries habitat. These efforts are guided by four other existing plans:

1. John Day Resource Management Plan, BLM, 1985.
2. Two Rivers Resource Management Plan, BLM, 1986.
3. Anadromous Fish Habitat Management on Public Lands, BLM, 1988.
4. Integrated System Plan for Salmon and Steelhead Production in the Columbia River Basin, Columbia Basin Fish and Wildlife Authority, 1991.

These documents provide a comprehensive program for fish habitat improvement in the John Day System; a program that is a continuation of projects begun several years ago. Actions aimed at improving fish habitat include:

- habitat inventory and land acquisition to consolidate key habitats,
- correcting livestock management where it adversely affects fish habitat,
- retaining buffer strips along streams during tree harvesting,
- providing fish passage where necessary,
- increasing habitat diversity by natural or structural means,
- rehabilitating riparian vegetation and
- monitoring and evaluating the programs.

The South Fork and Bridge Creek are currently the highest priorities for BLM habitat inventory and improvements.

Improvements in fisheries habitat are addressed in the grazing allotment evaluation process, the John Day River Aquatic Habitat Management Plan and the South Fork of the John Day River Aquatic

Habitat Management Plan. These plans have identified over 130 different fish enhancement projects throughout the basin. Some examples of these projects are: revegetation of riparian

areas, installation of fish screens at water diversion points, streambank stabilization and provision of fish passage facilities.

In 1992, the Northwest Power Planning Council (NPPC) amended its Columbia River Basin Fish and Wildlife Program and developed a comprehensive strategy for improving survival of Columbia River Basin salmon at every stage of their life cycle. The strategy was designed to improve salmon runs while avoiding undue disruption of river uses and adverse impact to the region. There are two goals under this program; the first is to double salmon production in the Columbia River Basin from approximately 2.5 million fish returning to 5 million fish. The second goal is to accomplish the doubling goal with no appreciable risk to the biological diversity of the fish populations. The new strategy gives high priority to habitat protection and improvement. BLM has agreed to revise all livestock management plans and incorporate actions into these plans that will protect, improve and enhance riparian habitat, improve water quality and identify and protect permanent riparian management areas.

Wildlife Habitat

Issue Described

The amount and quality of wildlife habitat in the John Day Basin has been declining for several years. There are many causes, including inappropriate logging practices, overgrazing, wildfire, drought and recreational activities. Logging has removed critical escape cover. Grazing has resulted in competition for food between cattle and wildlife and destruction of riparian vegetation. Wildfire suppression has changed vegetative composition. Increasing recreation use has resulted in disturbances, harassment and displacement of some wildlife species.

Even though wildlife habitat is in a degraded state, wildlife resources were judged to be an outstandingly remarkable value in the wild and scenic segments of the John Day System. All involved government agencies desire to work together with private landowners and citizen volunteers to restore and improve wildlife habitat.

Existing Guidance

The basic framework for wildlife habitat improvement on BLM lands was described in the Two Rivers and John Day Resource Management Plans. These have been supplemented by Coordinated Resource Management Plans (CRMPs) and Habitat Management Plans (HMPs).

Water Quality and Quantity

Issue Described

Water quality and quantity are in an undesirable condition in the John Day River System for most of each year. The major water quantity problem in the entire system is the seasonal distribution of runoff and discharge. Flows in the winter now are higher than in the past, leading to loss of storage water from the basin and erosion of stream banks followed by sedimentation

Table 34: Problems of Water Quality and Quantity, John Day River Basin.

Problems	Causes
1. Seasonal distribution of runoff and discharge (higher flow in winter, lower flow in summer).	Climate and weather, exacerbated by improper land & water management.
2. Watershed degradation (quick run-off, poor water storage, bank erosion, lowered water table).	Improper land management.
3. Water quality degradation (sedimentation, high temps., low dissolved oxygen, fecal pollution, mine effluents).	Improper land, water and waste management.
4. Conflicts between in-stream and out-of-stream uses.	All of the above.

downstream. Flows in the summer are much less than in the past, resulting in degradation and loss of fish habitat. Also, pollution of the river with fecal matter has created a health problem during the summer (WRD, 1991). Major water problems in the basin are shown in Table 34 .

Existing Guidance

The WRD regulates water quality and quantity on public and private lands throughout Oregon. The BLM has agreed to work toward meeting standards set by WRD on BLM-managed lands within the John Day System. To that end, a program designed to monitor water quality in the rivers and tributaries originating on BLM lands has been implemented. A Solomat recorder is being used in strategic locations to collect water quality information such as dissolved oxygen, nitrate concentration, pH, conduction, turbidity and temperature. Ryan Tempmentors and Hobometers are in use in many permanent locations collecting temperature data only. The BLM, WRD and SCS are cooperating in data collection at five monitoring sites in the John Day System. The BLM will take aggressive, appropriate actions to correct any water quality or quantity problems on BLM lands. BLM also will work with WRD and other appropriate agencies to correct water problems originating on non-BLM lands.

Riparian Vegetation

Issue Defined

The condition of vegetation in the riparian zone of the John Day River System has been an issue of concern for the BLM and the public for several years. Of particular concern is the portion of the river from Cottonwood Bridge to Butte Creek. This is an extremely remote and popular boating segment where significant cattle grazing has been occurring through a long growing

season. The BLM has received numerous complaints from recreationists concerning the poor riparian vegetation conditions, especially at popular recreation sites.

Existing Guidance

The BLM began a systematic program of monitoring the riparian vegetative condition on the John Day in 1987. The highest priority was given to segment 2, from Cottonwood Bridge to Butte Creek. Information gained showed that riparian conditions vary greatly on different grazing allotments, but that general improvements were certainly needed. The public interest created by the "Salmon Summit" has resulted in an intensified inventory and monitoring program which will supplement the original project. Data on riparian vegetation throughout the John Day System is being collected through field studies and through the use of a video camera mounted in a helicopter. Locations are identified through a Global Positioning System.

Necessary corrective actions are taken through the management of individual grazing allotments, which are subdivisions of public land where boundaries are based on topography, geography, land ownership and historic use.

Decisions on how grazing will be managed are established during the development or modification of a Cooperative Rangeland Management Agreement, changes to existing leases, issuance of decisions or development of individual Allotment Management Plans (AMPs). These AMPs are developed by the standard BLM planning process which provides for consideration of alternative actions, recommended actions, public comment on the recommended actions and a final decision.

Development or revision of AMPs along the John Day River began in the 1980's. Options considered in these AMPs vary from no grazing to grazing management strategies designed to improve riparian conditions. Options considered and selected vary according to the biological and physical needs of individual allotments and the social needs of the individual allottees. Grazing management strategies include the implementation of rotation grazing systems, developments such as fences and livestock water, changes in the grazing systems, adjusting livestock numbers and limiting the grazing season to March and April only.

Cultural Resources

Issue Defined

Significant cultural sites are plentiful along the John Day River, but their actual numbers and location are not yet fully known. Vandalism of many sites is occurring at an alarming rate and is increasing. Managing agencies must develop additional strategies to protect these sites.

Existing Guidance

Currently, management of cultural resources within the John Day River System consists of providing limited protection and preservation in accordance with federal law. Previously recorded sites in some portions of the river are monitored on an annual basis. Some portions of

the river receive less frequent monitoring, especially where information is lacking.

A cultural resources management plan will be written in the near future. Its development will be closely coordinated with the appropriate Native American group(s), as well as other interested publics. Planning and decision making will be based on recommended BLM use categories which classify cultural resources into potential alternative uses.

Paleontological Resources

Issue Defined

The John Day River Basin contains numerous localities where fossils occur. Fossil collecting is an increasingly popular activity for the general public. Many organizations and universities also desire to collect fossils in the area.

Fossils are a nonrenewable resource that are scientifically important. Some fossils, especially vertebrate fossils, are especially valuable both scientifically and commercially. Fossils and fossil localities are exceedingly sensitive and may be adversely impacted or depleted by exposure to the elements and disturbance by people.

Existing Guidance

Through current regulations, fossils are divided into different classifications with each treated in a different manner. Of the various groups, vertebrates, normally the rarest of fossil groups, may be collected only by bona fide scientific researchers and institutions under permit authority. Collection of vertebrate fossils without a permit or the collection of any fossil with the exception of petrified wood for commercial purposes constitutes unauthorized use, and violations may be dealt with under appropriate statute(s). Common invertebrate fossils may be collected for noncommercial purposes without a permit. Limited quantities of petrified wood may also be collected for noncommercial purposes under terms and conditions consistent with the preservation of significant deposits as a public recreational resource. A permit for collection of petrified wood is required for single specimens over 250 pounds, for removal of more than 25 pounds per day person and for removal of more than 250 pounds per year. A special commercial permit must be obtained for the collection of petrified wood for sale.

Utility Corridors

Issue Defined

Agencies and landowners regularly receive requests to place pipelines, buried cables, overhead lines and other utility lines across their land. Of special interest are requests to cross the John Day River with these utilities.

Agencies and landowners must often decide whether or not to grant these requests and if so, what stipulations should be attached to minimize harmful impacts.

Existing Guidance

The BLM Resource Management Plans provide the necessary guidance on processing requests for utility and transportation rights-of-way. These documents identify certain corridors or river crossing "windows" where utilities must be placed to cross a given area. Several utility lines and pipelines already cross the John Day River in previously defined corridors. Any future requests granted will require the use of these corridors. BLM-designated corridors are generally 1000 feet on either side of existing road, pipeline or major electric transmission right-of-way center lines.

BLM LIBRARY
PC 100 000 00

IV. Alternatives, Actions and Environmental Consequences

A. Management Common to all Alternatives

Actions

Some management actions have been taken or are in the process of being implemented as a result of previous planning decisions or interagency agreements. Other actions believed to lack reasonable alternatives are described here as Management Common to All Alternatives. They are considered to be actions that will be carried forward under all alternatives. They include the following:

Boating Use Allocations

Boating use is not presently limited on the John Day River. However, this may be necessary in the future. Where limited entry systems have been established on other rivers, the type of allocation system to be adopted has frequently been one of the most controversial issues addressed.

A method for allocating use must be selected before use limits can be implemented. A variety of allocation methods have been developed and put into use on other rivers. These systems have been based on historical use patterns, arbitrary splits between commercial and noncommercial users, or "common pools" where each applicant has an equal chance. On some rivers combinations of these methods have been tried.

In order to evaluate various allocation systems, a set of 11 public policy criteria has been developed for use in the evaluation. The allocation method selected for the John Day River should, to the extent possible, meet the following criteria:

- 1) Treats all commercial and noncommercial publics equitably.
- 2) Is designed to minimize disruption of guided and outfitted services.
- 3) Does not create a private property value out of a public resource.
- 4) Accommodates all types of boaters (long-term planners, as well as short-term and spontaneous users).
- 5) Fosters a high quality of outfitted services.
- 6) Minimizes public costs associated with river access.
- 7) Provides an efficient system (where "no shows" and cancelled trips are made available to others).
- 8) Makes the system as easy to administer as possible.
- 9) Penalizes violators.
- 10) Is as flexible as possible to accommodate individual changes in plans based on weather, water levels, quality of fishing, etc.
- 11) Can be defended to diverse groups.
- 12) Considers protection of the biological and physical components of the ecosystem.

It is also important to make the allocation method selected for the John Day River System as consistent as possible with methods used on other rivers in the region.

The decision on allocation method will be made according to the following process. Use allocation methods will be intensively studied over the next two years. During this time, efforts to better manage and distribute use will be made to avoid imposing use limits as long as possible. At the end of the two year period, a report will be written that describes efforts made to avoid use limits, the results of those efforts and a decision on which allocation method will be used and when it will be used. The final decision will be coordinated with the allocation decision for the Lower Deschutes River.

Guided and Outfitted Services

Guided and outfitted services are not presently a major portion of the total recreational use on the John Day River System. However, a limited number of guides and outfitters are established and provide a valuable public service on the river. These services must be managed in a fair and consistent manner. Management directions for guided and outfitted services are the following:

- 1) All commercial outfitters and guides will be required to obtain a Special Recreation Use Permit administered by BLM.
- 2) Group size for non-motorized guides will be limited to 16 people total per party per day. Motorized guides will be limited to seven people per boat per day, including the operator.
- 3) The BLM will coordinate permit requirements and regulatory controls, including development and implementation of a uniform and consolidated system for the issuance, administration and enforcement of permits in the entire planning area.
- 4) The BLM will emphasize the development of a coordinated public information and education program utilizing guided and outfitted services as dispensers of information, brochures, maps and other material to help increase public understanding of individual stewardship responsibilities while using the river.
- 5) The BLM will ensure that shuttle and boat rental services are in compliance with PUC rules and regulations. A permit will be required for all commercial services utilizing one mile or more of BLM roads and public lands or facilities.
- 6) Guides and outfitters will be required to be certified for operation. Certification requirements will be developed and administered by a committee made up of representatives from BLM, State Parks, Oregon State Police, Oregon Department of Fish and Wildlife, Oregon State Marine Board and the guiding industry.

Emergency Services

- 1) The BLM will continue to implement decisions in the Two Rivers and John Day Resource Management Plans regarding the prevention and suppression of wildfire to protect public values, such as vegetation, visual resources, and adjacent private property.
- 2) The BLM will increase enforcement of fire regulations and enhance fire prevention and suppression efforts. The BLM also will increase individual accountability for all river users in areas with high economic values at risk during periods of high and extreme fire hazard.
- 3) The BLM will improve coordination efforts in dispatch and carrying out search and rescue efforts and response to potential natural and human-caused emergencies in the John Day River System.

- 4) The affected agencies will develop a coordinated and effective communication system with common radio frequencies.
- 5) The BLM will encourage cooperation between and establish joint annual emergency service training exercises for agencies, fire districts, outfitters, and private individuals.
- 6) The BLM will assist in developing a coordinated public information and education program which explains fire regulations, individual liability and fire hazard within the John Day River System.

Law Enforcement

a. Actions

The BLM will work with other law enforcement agencies to improve law enforcement in the following ways:

- 1) Improve coordination of law enforcement efforts by establishing uniform regulations throughout the river area to enforce Federal, State, and local laws.
- 2) Develop uniform and efficient operating methods for dealing with various enforcement and court situations in federal and state jurisdiction areas.
- 3) Develop a coordinated public information and education program which emphasizes the laws and regulations in effect in the John Day River System and the rationale and penalties behind them.
- 4) Work with the courts to establish innovative penalties for violations that would serve as a greater deterrent than the present low fine level. This could include community service, improvement work along the river, forfeiture of equipment and/or increased penalties.
- 5) Develop an information-sharing mechanism to identify repeat offenders.
- 6) Establish uniform and effective traffic regulations for roads in the river system and increase the number of federal, state, and local law enforcement personnel.

b. Regulations

Pursuant to 43 CFR 8351.2-1, the following acts are prohibited on BLM-administered lands in the following areas:

- Proposed and final boundaries of the John Day Wild and Scenic River.
 - Proposed and final boundaries of the South Fork John Day Wild and Scenic River.
 - Within _ mile of the remaining non-wild and scenic river segments in the John Day River System, including the Main Stem, North Fork, Middle Fork, and South Fork.
- 1) Camping
 - a. Camping longer than any established camping limits within the river system.
 - b. Digging or leveling the ground at any campsite.
 - c. Installing permanent camping facilities.
 - d. Camping on river islands, or any area posted as closed to that use.
 - e. Occupying any place designated for day use only between the hours of 10:00 p.m. and 7:00 a.m.

- f. Leaving campground equipment, site alterations, or refuse after departing any campsite.
 - g. Cutting live vegetation.
 - 2) Fires
 - a. Building or maintaining any open campfires except those contained in a firepan or similar metal container with sides measuring at least 2" in height.
 - b. Leaving any fire unattended or without completely extinguishing it.
 - c. Burning items such as tin, aluminum, glass, or other noncombustible items in any campfire.
 - d. Throwing or discarding lighted or smoldering material, or lighting, tending, or using a fire, stove, or lantern in such a manner that threatens or causes damage to or results in the burning of property or resources, or creates a public safety hazard.
 - e. Using or possessing fireworks or firecrackers.
 - f. Failing to observe any fire orders, closure regulations or notices issued by the BLM or ODF.
 - 3) Sanitation and Refuse
 - a. Disposing of refuse in other than refuse receptacles.
 - b. Depositing refuse in the plumbing fixtures or vaults of a toilet facility.
 - c. Using government refuse receptacle for dumping household, commercial or industrial refuse brought in as such from private or municipal property except in accordance with conditions established by an authorized official.
 - d. Disposing human body waste except at designated locations or fixtures provided for that purpose.
 - e. Draining any refuse from a trailer or vehicle, except in facilities provided for that purpose.
 - 4) Firearms.
 - a. Discharging a firearm within 1/4 mile of the river anytime except during authorized hunting seasons, and any time within a developed recreation site.
 - b. Discharging a firearm at any time within 150 yards of a residence, building, developed recreation site, or occupied area.
 - 5) Disorderly Conduct.
 - a. A person commits disorderly conduct when, with the intent to cause public alarm, nuisance, jeopardy or violence, or knowingly or recklessly committing a risk thereof, such a person commits any of the following prohibited acts:
 - Engaging in fighting, threatening, or violent behavior;
 - Using language, an utterance or gesture, or engaging in a display or act that is obscene, physically threatening or menacing, or done in a manner that is likely to inflict injury or incite an immediate breach of the peace;
 - Engaging in nudity or indecent exposure;
 - Making noise that is unreasonable, considering the nature and purpose of the actor's conduct, location, time of day or night, and other factors that would govern the conduct of a reasonably prudent person under the circumstances;
 - Creating or maintaining a hazardous or physically offensive condition.

6) Vehicles

- a. Parking in such a manner as to impede or obstruct the normal flow of traffic, creating a hazardous condition, or parking in any area designated as closed to parking.
- b. Exceeding posted speed limits.
- c. Disregarding traffic control devices.
- d. Failing to report a motor vehicle accident resulting in property damage, injury, or death within 24 hours.
- e. Traveling off of designated roads, parking areas, or launch sites.
- f. Operating any vehicle that does not meet state registration, licensing, and safety requirements.

Trespass

- 1) The BLM will continue to implement decisions in the Two Rivers and John Day Resource Management Plans regarding increasing public land ownerships in the John Day River System through exchange or other means to reduce the potential for trespass onto private lands.
- 2) The BLM will emphasize the development of a coordinated public information and education program which utilizes large scale map signs in key locations and detailed user maps that show public/private land ownership. The BLM also will install on-the-ground ownership identification markers between BLM, state, and private lands adjacent to the river as well as in the upland areas, in order to reduce the potential for trespass. An on-the-ground river-mile marking system also will be developed and implemented, especially in the more heavily used river segments.
- 3) The BLM will work closely with adjacent private landowners and local law enforcement authorities to enforce trespass laws within the John Day River System.

Water Quality and Quantity

Fish in the John Day River System have been declared by Congress to be an outstandingly remarkable value. They are totally dependent on suitable water quality and quantity. The BLM will manage the watersheds on public land under its administration so that the highest achievable quality water and suitable quantities of water enter the streams to maintain and enhance fish populations.

The BLM, in cooperation with appropriate agencies, will strive to develop and maintain water quality and quantity monitoring stations at or near the beginning and/or end of each river segment described in this plan. This system of monitoring stations will provide a means to more quickly assess the origins of any degradation of water quality and will provide river flow information which can help in the cooperative effort to protect public health and maintain and enhance fish populations.

Local BLM offices will continue to seek a minimum instream flow study to be conducted by qualified personnel acceptable to BLM.

Fire Management

The main emphasis of the fire management program in the John Day River System will continue to be prevention and suppression of wildfire to protect public values such as vegetation, visual resources, and adjacent private property. Prescribed fire may be used to reach multiple use objectives. When prescribed fire is considered under various programs it will be coordinated with the ODF and adjacent landowners and carried out in accordance with approved fire management plans and appropriate smoke management goals and objectives.

Fire control actions in the John Day River Basin will be selected to minimize visual and ecological impacts while aggressively suppressing wildfire. Separate fire management plans will be developed for any Wilderness Study Areas if they are designated as Wilderness by Congress.

Weed Control

The control of noxious weeds requires an integrated management program. These control methods include preventative actions, biological control, prescribed burning, mechanical practices, manual practices and chemical control. The selected control measures for treatment of BLM-managed lands will be consistent with the Record of Decision on BLM's Northwest Area Noxious Weed Control Program EIS (December, 1985) and Supplement (March, 1987). Control methods will be subjected to a district-wide environmental analysis and resource assessment review, tied to the subject EIS. Control will be considered on BLM managed lands where efforts are coordinated with owners of adjoining infested, non-public lands. Coordination and cooperation with and between county weed control officers/districts will continue on a regular basis.

Utility Corridors

- 1) Management decisions and land use allocations in the Two Rivers and John Day Resource Management Plans will continue in effect. These decisions are that new utility or transportation facilities will be permitted to cross the John Day River System on BLM-managed lands only where there are designated corridors.
- 2) Recommendations made to applicants and actions approved will be consistent with the objectives of BLM's Two Rivers and John Day Resource Management Plan (RMP).
- 3) BLM-managed lands will continue to be available for rights-of-way, including multiple use and single use utility/transportation corridors following existing routes, communication sites and roads. Issuance of leases and/or patents under the Recreation and Public Purpose Act and other permits or leases to public entities for development of public lands also will continue.
- 4) Applications will be reviewed on an individual basis for conformance with the Two Rivers RMP to minimize conflicts with other resources or users.

Information and Education

- 1) The BLM will emphasize the development of a coordinated public information and education program for the entire basin which utilizes interpretive signs, brochures, maps, and other material to gain public understanding of the following elements in the John Day

River System.

- a) Fish and wildlife habitat
- b) Water quality
- c) Riparian and upland ecosystems
- d) Land, water, and air use practices
- e) Off-reservation treaty rights related to plants and animals of traditional significance to the Tribes
- f) Threatened and endangered species
- g) Historical, archaeological, and cultural sites
- h) Enforcement of established laws, regulations, and policies
- i) Boating use regulations
- j) Availability, location, and quality of campsites
- k) Access to the river
- l) Good outdoor manners, including no-trace camping and stewardship responsibilities
- m) Public safety and emergency services, including fire regulations
- n) Courtesy toward other users
- o) John Day River System fishery
- p) Angling rules and regulations
- q) Identification of land ownership, public and private
- r) Volunteers and campground hosts
- s) User fees, passes, and guided and outfitted services permits and fees
- t) Road and trail identification and use guidelines
- u) Noxious weeds

The BLM will publish comprehensive maps with all points of interest, land ownership, major campsites, toilet facilities, access roads and trails, launches and landings, and natural and cultural resources information. Where helpful, descriptive information about facilities and standards of access roads, launches and campsites will be provided. The map also will have no-trace camping requirements, riparian and upland protection practices for recreational users, emergency communication network outlined and laws and regulations.

- 2) The BLM will sign all public and private lands along the river. Signs will be visible from the river except for appropriate signs in upland areas. All signs will be of the same color, material, size, and type of print or symbols and placed in somewhat predictable places. Old and defaced signs will be replaced as needed.
- 3) The BLM will develop a coordinated sign plan and design for the John Day River System. All signs including those at boat launching, landing and camping sites used for identification or information will be of the same sign standards, color, type of print and placement, etc., as above so that all signs along the river are identified with the recreation area. Major campsites, launch sites, and parking areas will be signed with uniform signs to direct users to specific areas for specific activities. For example: Launch sites will have clearly signed staging areas, parking areas, and launch areas as well as places set aside for camping.
- 4) The BLM will actively recruit volunteers to assist in public information/education programs as well as cleanup, resource rehabilitation work and campground hosts.

Wildlife Habitat

- 1) BLM will continue to implement decisions in the Two Rivers and John Day Resource Management Plan regarding increasing public land holdings in the John Day River System through exchange or direct acquisition to increase/improve wildlife habitat. The State of Oregon also will participate in public land acquisition.
- 2) The BLM will emphasize the development of a coordinated public information and education program which utilizes interpretive signs, brochures, maps, and other material to gain public understanding of wildlife and other natural resources in the John Day River System.
- 3) The BLM will coordinate wildlife habitat inventories and management efforts to ensure that management objectives are met.
- 4) The BLM will continue to implement decisions relating to off-road vehicle management in the Two Rivers and John Day Resource Management Plan. This includes total closure or limiting vehicle travel to existing or designated roads to protect or enhance wildlife habitat and other values.
- 5) The BLM will coordinate and cooperate with county weed control officers on a regular basis in the control of noxious weeds. Control methods will be proposed consistent with the Record of Decision on BLM's Northwest Area Noxious Weed Control Program EIS. Control methods then will be subjected to site-specific environmental analysis consistent with the EIS. Control will be considered by the BLM on public lands where efforts are coordinated with owners of adjoining infested, non-public lands. Proper grazing management will be emphasized prior to control to minimize possible reinfestation.
- 6) Off-reservation treaty rights related to plants and animals with traditional significance to the Tribes will be recognized by the BLM. No management actions will be permitted which would negatively affect identified root digging areas, medicine gathering areas, sensitive waterfowl nesting areas or animal species such as otter or eagles.
- 7) The BLM will consult with the U.S. Fish and Wildlife Service (USFWS) on all proposed actions which may affect any federally listed or candidate threatened or endangered species. Consultation will be done in accordance with Section 7 of the Endangered Species Act, as amended.
- 8) Degraded campsites needing rehabilitation will be closed until vegetative recovery has occurred. Once rehabilitation is complete, human activities such as camping and vehicle use may be allowed if the areas are capable of sustaining use and that use is consistent with management objectives.
- 9) New camping areas/facilities will be located outside of riparian areas and away from sensitive wildlife habitats.

Cultural Resources

- 1) The BLM will compile and maintain a confidential, historical/ archaeological resource database/atlas, incorporating known and/or recorded historical/archaeological resource sites (including information gleaned from ethnographic and historic sources and oral histories). The Tribes will be asked to contribute information on significant traditional use sites/materials. In addition, confidential overlay maps documenting all historical/archaeological resource inventory information will be maintained.
- 2) The BLM will continue to inventory lands under its jurisdiction for historical/archaeologi-

cal resources and evaluate the significance of known historical/archaeological resource sites.

- 3) The BLM will routinely consult with, and invite the participation of, the Tribes in the early planning stages of proposed surface-disturbing activities.
- 4) The BLM will coordinate fire control plans with historical/archaeological resource concerns (e.g., aggressively fighting fire to protect historic structures).
- 5) The BLM will stabilize and protect high priority historical/archaeological resource sites from human-caused or natural sources of erosion or deterioration.
- 6) The BLM will increase emphasis on enforcement of established laws, regulations, and policies related to the protection and preservation of historical/archaeological resource values. A monitoring plan will be developed and implemented to ensure adequate protection.
- 7) The BLM will develop and implement a public information/education program aimed at increasing public awareness of and appreciation for the significance of historical/archaeological resources.
- 8) The BLM will conduct an appropriate level of inventory to identify historic and prehistoric sites or features in areas proposed for surface-disturbing projects (e.g., range developments, road or trail construction, and land disposal or acquisitions). Sites discovered will be evaluated using criteria for placement on the National Register of Historic Places in consultation with the State Historic Preservation Officer. The BLM considers the effect of any proposed undertaking on sites which meet the National Register criteria by following regulations of the Advisory Council on Historic Preservation or a memorandum of agreement negotiated with the Council.

In most cases, proposals would include a no adverse effect or an adverse effect finding to National Register quality sites. These sites are avoided by relocating ground-disturbing activities. Where relocating a planned project is not feasible, the project will either not be allowed or mitigation of adverse effects to significant cultural properties may be necessary. Mitigation will usually be an attempt to extract and preserve those attributes of a site which qualify it for the National Register. For example, many prehistoric sites are significant for the information they may provide about ancient Indian life-styles and cultural adaptations. Various levels of site recording, excavation and analysis can often retrieve the important information, preserving it in records and reports.

Sites with sociocultural values or recreational values suitable for public interpretation may be mitigated through alternate methods of data recovery. Decisions about the treatment of such sites will be made on a case-by-case basis in consultation with the State Historic Preservation Officer and Advisory Council on Historic Preservation and the Tribes, as appropriate.

Paleontological Resources

- 1) Inventory and collection of paleontological resources will be conducted with the least possible scenic and environmental impacts within the John Day River System.
- 2) BLM will allow, through a permit system, inventory and collection of paleontological resources by qualified individuals or organizations only. BLM will attach appropriate

stipulations to the permit to ensure minimal environmental damage and proper handling and curation of the collected paleontological resources.

Non-motorized Boating

- 1) The BLM will continue to emphasize the development of a coordinated public information and education program. This program will utilize signs, brochures, maps, and other material to gain public understanding of boating use regulations, availability of campsites and access to the river. This program is intended to disperse use, promote boating safety and enhance boating enjoyment.
- 2) The BLM will increase and better coordinate law enforcement efforts with cooperating agencies.
- 3) The BLM will develop a coordinated system for gathering and analyzing boating data.

Motorized Boating

The BLM will recommend to the OMB that motorized boating not be permitted on river segments when the flow drops below 2000 cfs for boater safety and to protect streambank stability, spawning fish and to reduce siltation of spawning beds.

Public Access

- 1) Motor vehicles on public land will be restricted to designated roads, parking and camping areas. Routes not designated will be closed and rehabilitated.
- 2) The BLM will pursue opportunities to acquire new legal access with the preferred methods of donation, land exchange, purchases in fee title or easements from willing sellers.
- 3) The managing agencies will develop a coordinated transportation and road classification system with designated and posted speed limits for all existing access roads and trails.
- 4) The BLM will increase emphasis on implementation and enforcement of decisions in the Two Rivers and John Day River Resource Management Plans regarding areas which are open, limited, or closed to motorized vehicles.
- 5) The BLM will take action to prohibit the landing of aircraft on existing primitive strips of public land on the banks of the river within the John Day River System, except for emergency and administrative purposes.
- 6) Brochures, maps, bulletin boards and other public material will contain information on access roads, parking, launching sites and trails.

Camping

- 1) The BLM will develop a system for gathering and analyzing camping data to maintain accurate monitoring information to ensure that management objectives are met.
- 2) Camping will be prohibited on all islands.
- 3) Campsites and other developed facilities in roaded segments of the river will be designed for access and use by persons with disabilities.
- 4) Campers will be required to pack out all human waste and garbage from sites with no sanitation or garbage facilities.

BLM LIBRARY
R9 150A BLOS 50

- 5) Degraded campsites needing rehabilitation will be closed until vegetative recovery has occurred. Once rehabilitation is complete, camping may be allowed if the campsites are capable of sustaining use and that use is consistent with management objectives.
- 6) Those areas where a water system exists or will be provided, will also have waste water disposal facilities for "gray water".
- 7) BLM will eventually charge a fee for camping at developed recreation sites.

Scenic Quality

All public lands within the final Wild and Scenic River boundaries will be designated and managed as VRM Class II, except Wilderness Study Areas which will be VRM Class I. All public lands within $\frac{1}{2}$ mile of the river in the non-wild and scenic river segments also will be VRM Class II (See definitions in Appendix).

There are two exceptions to these designations being considered. VRM Class I is considered for:

- 1) All public lands within the final wild and scenic river boundaries in segment 2, Cottonwood to Butte Creek.
- 2) All public lands within $\frac{1}{2}$ mile of the river in segment 7, Monument to Dale.

These exceptions are discussed further in their respective segment sections of this plan.

Riparian Vegetation

Management objectives for riparian vegetation along the John Day River in segments 1, 2, 3 and 4 are defined in the Two Rivers RMP (June, 1986). Management direction is highlighted as follows: "Riparian areas on public lands will be managed to reach full potential, with a minimum of 60 percent of the vegetative potential achieved, within 20 years. Livestock grazing will be managed to reach riparian objectives."

The John Day RMP directs the management of riparian zones to enhance natural values. This is to be done through:

- Bureau/Lessee coordinated grazing treatments and range improvements;
- reducing numbers of grazing animals as appropriate;
- changing class of livestock as deemed necessary;
- either eliminating hot season grazing or applying rotational grazing treatments;
- locating salt away from riparian zones;
- locating fences so as not to confine or concentrate livestock near the riparian zones;
- creating riparian pastures as appropriate and applying conservative grazing treatments and stocking rates;
- developing alternative water sources away from riparian areas; and
- applying protective fences as a last resort.

Grazing management prescriptions based on sound scientific principles are or will be implemented for each allotment. Grazing prescriptions are tailored to accommodate physical, soil, vegetation

and stream flow characteristics on a site-specific basis. Riparian recovery potential is based on the observed results in areas protected from grazing for over 20 years and in allotments where scientifically-based management has been successfully applied for a long period of time.

Perennial streams and associated riparian areas that show substantial resource improvement with implementation of intensive grazing management include Gable Creek and Bridge Creek and tributaries in the Sutton Mountain CRMP area, the South Fork of the John Day River and tributaries from the county highway near Izee to Smoky Creek near Dayville, North Fork of the Crooked River and tributaries from Committee Creek to the Ochoco N.F. boundary and South Fork of the Crooked River below the Cold Springs Ranch. The BLM is able to implement necessary grazing use adjustments, management treatments and projects on the described areas to reverse declining natural resources through cooperative efforts with private lessees/landowners and partnerships with county, state, federal and private organizations.

The BLM's performance in implementing resource improvements practices is limited by available funding and manpower. These limits necessitate setting implementation priorities and the extension of timeframes to complete necessary resource recovery work.

Resource monitoring studies indicate that steady riparian recovery is occurring on intensively-managed allotments along the river and its tributaries. These studies include a wide variety of recognized and approved methods for determining resource trends and health on upland and riparian vegetation, upland and channel soil erosion, stream channel physical and biological characteristics, water quality and flow parameters and general flora and fauna diversity. One of the most simple but effective methods is establishment of a photo record from permanent photo points specifically sited along streams or on upland sites. By comparing these photographs over time, an interdisciplinary team of specialists can determine resource trend and condition and implement necessary management actions as appropriate.

In the above described intensive management areas, the BLM has a substantial photographic record showing steady resource recovery.

Inventory for special status plants normally occurs to some degree within all segments of the Wild and Scenic River corridor. Inventory is normally species-specific and is designed to increase knowledge about a particular species, including its preferred habitat and distribution. Monitoring of plant populations also occurs within the river corridor. Known populations are periodically revisited and observations made about the general health of the population, threats, estimated number of individuals and other information readily obtained from a onetime site visit (qualitative monitoring). In some cases, population and/or species parameters may be measured to provide more detailed information about population trends and/or casual agents of change (quantitative monitoring).

Prior to any ground disturbing activity or authorization of an activity which may result in a change of use in an area, the area of impact is surveyed for the presence or absence of special status plants. In the case of the Wild and Scenic River, any proposed recreational developments would be surveyed prior to project initiation. Should special status plants be found, projects would be moved, changed or withdrawn from consideration to protect and preserve these special status plant values.

Environmental Consequences

The majority of the Management Actions Common to All Alternatives are actions that are being implemented from previous plans, such as the Two Rivers and John Day RMPs, which were subject to previous, independent environmental analysis and appropriate public review. Following is a summary of the impacts of management actions proposed in this section.

1. Soil: Campsite monitoring and rehabilitation will allow for reduction of soil erosion in affected sites.
2. Water: Increased water quality monitoring will assist in establishing baseline data and in more quickly identifying water quality problems and their causes.
3. Vegetation: Meeting the riparian vegetation objectives will greatly improve riparian vegetation conditions. This will benefit wildlife, fish, water quality, threatened and endangered species and recreation.
4. Fish: Fish populations will benefit from the information and education programs that promote catch and release of fish.
5. Recreation Use: Recommending to OMB that they adopt rules requiring a 2000 cfs minimum water flow for motorized boat use is a proposed new restriction. It is proposed for boater safety and to reduce streambank erosion and disruption of fish spawning thought to be caused by motorized boat use at or below that level.
6. Recreation Experience: The method selected for limiting boating use will be attacked by some people as unfair. This will occur regardless of the method selected.

Law enforcement actions will enhance visitor comfort and safety. Monitoring and rehabilitating campsites will enhance the camping experience for most visitors.

Information and education programs will enhance the recreation experience of most visitors.

7. Public Services: Increased coordination with local governments will improve public services to the anticipated large increase in visitors to the John Day River System. But local governments will remain lacking in adequate public resources to provide search and rescue, emergency medical services and law enforcement for the expected large numbers of new visitors.

B. River Segment Locations

For ease of planning, the John Day River System was divided into segments. These segments are logical divisions of the river system based on land uses, ownership, access and other factors. For example: Segment 4 is a portion of the river that is readily accessible from State Highway 207 or Highway 19 and has a rural atmosphere. In contrast, Segment 2 has no public access except at Cottonwood Bridge and also has a primitive/wild atmosphere.

The river segments are illustrated on Map 6 and described below.

Main Stem

- Segment 1 Tumwater Falls (near the Columbia River) to Cottonwood Bridge (29.5 miles)
- Segment 2 Cottonwood Bridge to Butte Creek (57.5 miles)
- Segment 3 Butte Creek to Service Creek (60 miles)
- Segment 4 Service Creek to Dayville (55 miles)
- Segment 5 Dayville to Headwaters (72 miles)

North Fork

- Segment 6 Kimberly to Monument (16 miles)
- Segment 7 Monument to Dale (44 miles)
- Segment 8 Dale to Headwaters (52 miles)

Middle Fork

- Segment 9 North Fork Confluence to Headwaters (75 miles)

South Fork

- Segment 10 Dayville to County Rd. 67 (35 miles)
- Segment 11 County Rd. 67 to Headwaters (25 miles)

MAP 6

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

River Segments and Segment Maps Index

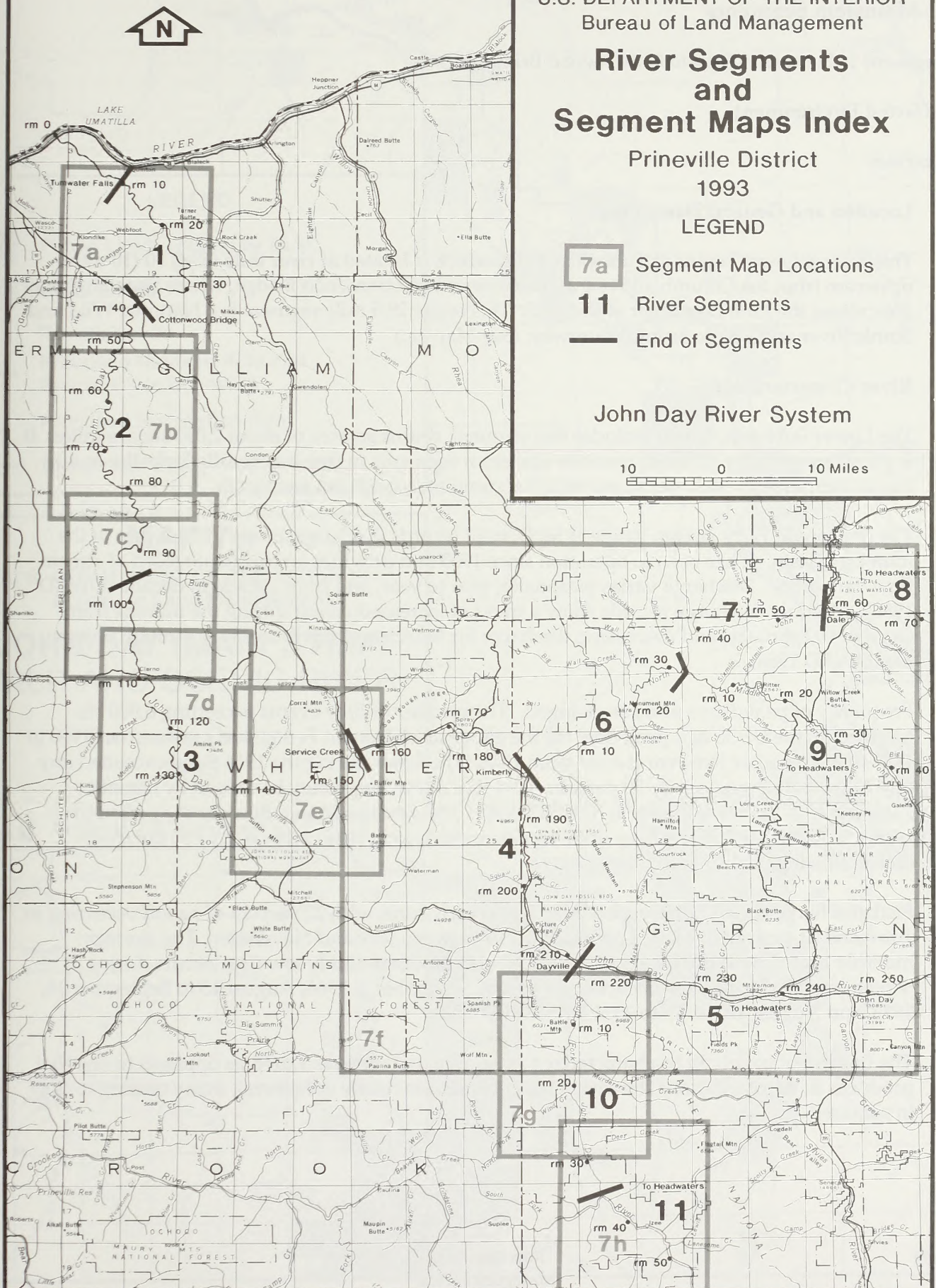
Prineville District
1993

LEGEND

- 7a** Segment Map Locations
- 11** River Segments
- End of Segments

John Day River System

10 0 10 Miles



C. Mainstem Segments

Segment 1: Tumwater Falls to Cottonwood Bridge

Affected Environment

Overview

Location and General Description

This river segment begins at Tumwater Falls, which is located at river mile (RM) 10 (10 miles upstream from the Columbia River) and continues to Cottonwood Bridge, where State Highway 206 crosses the John Day River at RM 39.5. This entire 29.5 mile segment is a National Wild and Scenic River and a State Scenic Waterway. (See Map 6a.)

River Characteristics

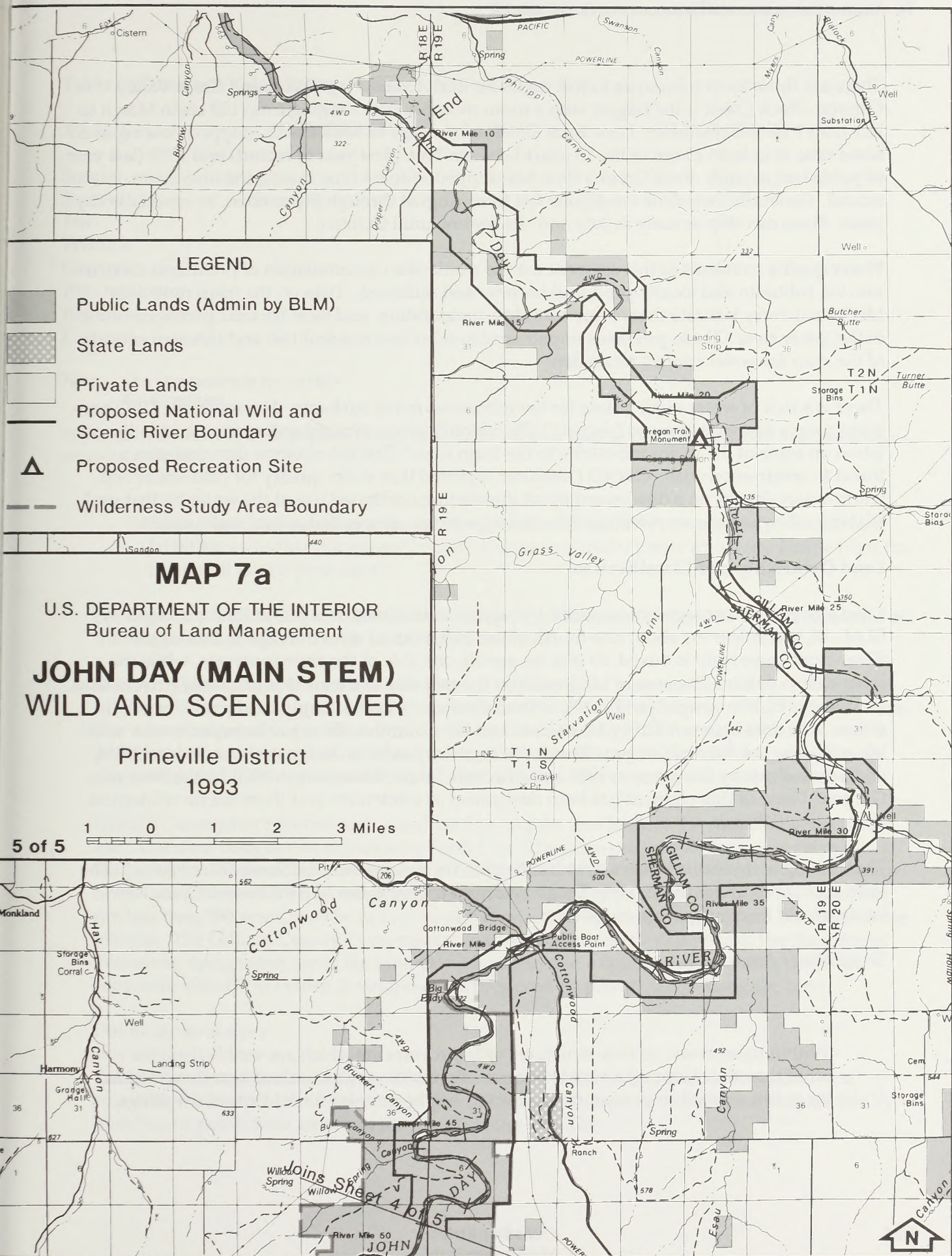
The Lower Subbasin, which includes this segment, drains an area of about 2,030 square miles. It is physiographically different from the upstream segments in that it generally lacks the mountainous terrain and high elevations which accumulate significant snowpack.

The McDonald Ferry stream gauge at McDonald records discharge for over 95 percent of the John Day Basin. It has been in operation since 1905 and provides an excellent record of stream flow variability. Discharge varies seasonally, year to year, and from decade to decade (OWRD 1986). Monthly discharge records show a trend of increased runoff during the months from October to February, and decreasing discharge for March and April, and July through September (OWRD 1986).

Frequency of peak flows also has changed. The number of flow events exceeding 6,900 cfs (defined by the USGS as a peak flow for the gauge at McDonald Ferry) was greater from 1980 to 1985 than any other five year period since 1948. The flows during the 1964 flood exceeded any other flow before or since by 50 percent. Changes in discharge may be caused by climatic variation or watershed alteration (OWRD 1986). The average annual flow for the period of record is 1,524,000 acre feet. On some occasions, such as in 1966, 1973, and 1977, the river ceased flowing.

Peak discharge occurs between late March and early June, with 22 percent of runoff occurring in April and 21 percent in May. Low flows occur between July and November. The average monthly high flow is during April (5,710 cfs). Minimum monthly low flow occurs during September (87 cfs); no flow occurred for part of September 2, 1966, August 15 to September 16, 1973, and August 13, 14, 19 to 25, 1977 (OWRD 1990).

The Lower Subbasin can be characterized as an area that receives water, as opposed to one that produces it. Most tributary streams in the subbasin are nearly ephemeral, many ceasing to flow in summer.



There are three main tributaries to this segment; Rock Creek, Hay Creek, and Grass Valley Canyon. Rock Creek is the largest with a mean monthly flow ranging from 120 cfs in March to less than 1 cfs in September. Lone Rock Creek, a tributary to Rock Creek, stopped flowing at some time in at least 10 out of the 13 years between 1966 (first year of record) and 1978 (last year of published record). Rock Creek's flow has stopped at some time during the nine years of record. Generally, non-flow conditions last from August through September. In especially dry years, flows can stop as early as July and not resume until October.

Water quality problems in this segment are the result of an accumulation of pollutants carried into the subbasin and locally-produced bacteria and sediment. Data on the main river near McDonald Ferry indicate that severe turbidity, temperature, and fecal bacteria problems occur in the lower river. These problems impair anadromous and resident fish and threaten safe use of the river for water contact recreation.

There is a lack of water quality data for the tributaries in the subbasin. However, the DEQ non-point source assessment maps (August 1978) identify severe streambank erosion and sedimentation on some of the major tributaries to the main river. This information demonstrates a threat to anadromous fish. OWRD (1986) has reported that water quality for cold-water and warm-water fish "is on a downward trend threatening continued use of the water by that use". Water quality parameters affecting fish are temperature, suspended solids, and turbidity.

Land Ownership and Classification

Land along this river segment is owned by private individuals or is public land managed by BLM. BLM administers about one-fourth of the 29.5 miles of river frontage in this segment. River-front ownership is mixed, so that frequently one side of the river is private, while the other side is public. The area at McDonald on the east side of the river is primarily private land, but there is BLM-managed land in the immediate vicinity and a county road provides public access. The area between Thirty Mile Creek and the Columbia River has been declared a wild-life refuge by the State of Oregon. The entire segment has been designated as a Federal Wild and Scenic River by Congress in 1988 and as a State Scenic Waterway in 1970 by the State of Oregon. None of this segment has been designated as wilderness and there are no wilderness study areas (WSAs).

The existing State Scenic Waterways classification for this segment is "Scenic River Area." The state guidelines under the existing Oregon Administrative Rules (OAR 736-40-065) for how lands should be managed are as follows:

Scenic River Areas:

Within these areas, no new structures or improvements which are visible from the river, other than those erected or made in connection with agricultural uses, or those needed for public recreation or resource protection will be permitted. Additional dwellings,

Table 35: Resource Value Ratings, Lower John Day River, Segment 1

VALUE	CONGRESSIONAL RATING	BLM RATING
Scenic	O	O
Recreation	O	O
Fish	O	O
Wildlife	-	O
Geologic	S	O
Paleontologic	S	O
Botanical	-	S
Cultural	S	O

Note: O = Outstandingly Remarkable
S = Significant

The values rated above by BLM as outstandingly remarkable have been rated by OPRD, through their Resource Analysis, as special attributes.

other than those necessary to existing agricultural uses, and commercial public service facilities, including resorts and motels, lodges and trailer parks which are visible from the river, will not be permitted."

Between Tumwater Falls and Cottonwood Bridge the Mainstem of the John Day River serves as the boundary between Sherman and Gilliam Counties.

Sherman County has planned and zoned lands adjoining the west bank of the river for agricultural use. The zone designation is Exclusive Farm Use (F-1). The purpose of the Exclusive Farm Use zone is to protect agricultural uses from encroachment by other incompatible uses and to provide tax incentives to assure that agricultural land is retained in agricultural uses. The lot size minimum for this zone is 40 acres and subdivisions and major partitions are prohibited.

Gilliam County has planned and zoned lands along the east bank of the river for agricultural use. The zone designation is Exclusive Farm Use. The main purpose of Exclusive Farm Use is the protection of productive farm lands in Gilliam County for agricultural use. A lot or parcel of 160 acres or more shall be considered a farm unit. A lot or parcel of less than 160 acres, but not less than 100 acres, may be approved as a farm unit if approved through the conditional use process. The Gilliam County Comprehensive Plan recognizes the existence of the State Scenic Waterway designation along the John Day Mainstem and a county policy stating they will cooperate with OPRD when development is proposed on private lands along the river.

Public River Access

Public river access is extremely limited in this segment. Tumwater Falls is accessible by a primitive road which is not open to the public. However, Tumwater Falls also is accessible by boat from a public boat launch at the mouth of the John Day.

The next river access is McDonald (also called McDonald Ferry, McDonald Ford and McDonald Crossing) at RM 21. Emigrants on the Oregon Trail crossed here, the "John Day River Crossing", and in 1858 a ferry was put into use. Today lands on the east side of the river are accessible by an unmaintained county road. There is no bridge. Lands on the west side of the river are not open to the public because the only access road is on private land. Public use that is occurring in this vicinity sometimes results in social or resource conflicts.

The only other public river access to this segment is at Cottonwood Bridge. The State of Oregon operates J.S. Burres State Park at this point, which is used almost exclusively for boat launching and landing. Facilities at this park include two vault toilets, a picnic table and garbage disposal receptacles. Additional picnic tables and two Bar-B-Que pits are planned to be added.

Resource Values

Wild and Scenic River Designation

The Mainstem John Day River from Tumwater Falls to Service Creek has been designated as Wild and Scenic by the U.S. Congress. The law identified certain "outstandingly remarkable values" and other "significant" values which must be "protected and enhanced" by the managing agency. The BLM developed a Resource Assessment which further defined these values and identified additional values to protect and enhance. The following table is a summary of the outstandingly remarkable and significant values identified by Congress or the BLM. These values apply to the Lower John Day River from Service Creek to Tumwater Falls, not just this segment.

Scenery

Part of this river segment flows through a deep canyon with some steep walls next to the river, especially near Cottonwood Bridge. More often, however, the valley is wide with agricultural fields near the river. The scene is more rural than wild in most places. There are agriculture-related structures such as fences, fields, and farm equipment frequently visible from the river. Signs of human activities in this area are those generally expected in a rural setting. The most significant visual intrusion in this segment is the large powerline crossing the river upstream from Hay Creek.

Vegetation

Only a small amount of riparian vegetation occurs in this segment of the John Day. It is composed primarily of grass/sedge/rush communities with bluegrass and clovers being common species. Willows, not observed during inventories in the early 1980's, have been increasing in number during the past decade. Riparian canopy is lacking but will improve as willows and other shrubs increase.

The potential for extensive stands of shrubs and trees is low, but there is a fair potential for numerous scattered clumps of shrubs to become established. Wetland habitats represented by

emergent aquatic vegetation are nearly nonexistent. Bank damage and associated bare soils occur on as much as 60% of the river banks. Bank damage results from high water flows and causes increased sediment to enter the river. Overgrazing by livestock has exacerbated this problem. Present overall habitat conditions and quality are rated as low due to an overall lack of riparian vegetative diversity and habitat structure.

No special status plants are known to occur. However, *Astragalus collinus* var. *laurentii* and *Rorippa columbiae* are suspected.

Fish

The Lower John Day River now serves primarily as a migration corridor for adult and juvenile anadromous fish. The key anadromous fish are steelhead, Chinook Salmon, and Pacific lamprey. These three species are important to Native Americans. Currently, the Lower John Day Subbasin produces approximately two percent of the summer steelhead in the entire system. As many as 600 adult steelhead spawn here annually. The subbasin supports a small fall Chinook run and also contains a large population of smallmouth bass and limited populations of other resident fishes. These include squawfish and channel catfish.

Historically, the lower river was a major production area for fall Chinook, steelhead and lamprey. Habitat degradation has caused serious declines in these species in the Lower John Day.

The majority of habitat in the subbasin is only marginally productive for anadromous fish compared to habitat in the upper watershed. The mainstem stream channel is largely unconfined, wide, and shallow. Low flows, sedimentation, minimal instream and riparian cover and high summer stream temperatures are frequent conditions. The most productive tributary is Rock Creek. However, even there, fish production is often restricted by low flows.

Habitat protection and improvement is needed in the Lower John Day Subbasin to support juvenile and adult anadromous fish during migration. Adequate streamflows and vegetative cover are needed to improve fish habitat.

Wildlife

Wildlife species diversity in this river segment is limited by the present poor riparian habitat conditions. These conditions limit nearly all wildlife species due to a combination of factors such as the lack of food and/or habitat for activities such as nesting or cover for rearing of young.

Overall poor habitat conditions limit use by nearly all species, with some species that would be expected to occur in these types of habitats, such as Lazuli buntings, probably being eliminated altogether by the present conditions. Some species, such as beaver and river otter, continue to utilize the river and may be increasing, but use is restricted due to lack of suitable habitat. A few species, such as the introduced chukar, thrive here by utilizing primarily the upland habitats away from the river. The lack of riparian or wetland type habitats also reduces the varieties and numbers of species such as bats or flycatchers due to the reduction in available foods

(flying insects) produced by those habitats. Typical species found presently along this segment of river are great blue herons, beaver, mule deer, rattlesnakes, nighthawks, cliff swallows, Canada geese, Brewers blackbird, Pacific tree frog, spotted sandpipers, chukar, and golden eagles. Species such as mountain lion and bobcats also are known to utilize the river canyon, although they are infrequently seen and particularly for the mountain lion, population densities are low.

This area is managed by the ODFW as part of the John Day Waterfowl Refuge for wintering and migrating waterfowl. It is intended as a resting area for waterfowl, and as such, its present habitat conditions do not appreciably reduce the quality of the area for that purpose.

Cultural

Segment 1 has been selectively inventoried for cultural resources by Polk (1976). This small sampling revealed the occurrence of only a few prehistoric sites. Based on this and subsequent site discoveries along the river, it appears that human occupation in the lower part of the canyon extends back some 8,000 years (Schalk 1987). It has been suggested that the interior portion of the canyon was most heavily used after about 5,000 years ago, although no formal testing/evaluation has been conducted since the 1970's to substantiate this theory.

Ethnographically, this segment of the river canyon is known to have been utilized by the Tenino group of Sahaptian-speakers, primarily for fishing. Several villages are known to have existed in the lower reaches of the river, although their exact locations have not been identified. Little is known about other or more current uses of the canyon by this or other adjacent Native American groups.

The primary historic use of this river segment occurred at what is now called McDonald Ford (McDonald). This was the only crossing point of the river for thousands of Oregon Trail emigrants between the 1840's and 1860's. In 1858 a ferry was built at the crossing. Later transportation routes used this same crossing. Other uses of this segment include homesteading, farming and ranching.

Recreation

Lack of public access and a great deal of private land restrict recreation opportunities in this segment. Potential opportunities include hunting, fishing, boating, swimming, wildlife watching, and exploring the Oregon Trail. Boats provide access to this area via the launch sites at Cottonwood Bridge and McDonald. The river is characterized by long quiet stretches broken by a few Class I and II rapids.

This segment falls within the State Scenic Waterway and the National Wild and Scenic River boundaries and both terminate at Tumwater Falls. Additionally, this segment contains the John Day River Wildlife Refuge which prohibits waterfowl hunting. The Oregon trail crosses the river near RM 21, providing an excellent interpretive opportunity.

BLM LIBRARY
RS 150A BLOS 80
2-1-77

There is a significant amount of BLM-managed land in this segment between Cottonwood Bridge and RM 30 near Hay Creek. But much of this land is separated from the river by narrow parcels of private land, especially on the west bank. There are a few small scattered and isolated tracts of BLM-managed land north of this area. One such tract boasts a few picnic tables and can be reached via a county road along Rock Creek. Floating from Cottonwood Bridge to Rock Creek (McDonald) normally takes approximately two days. Other than the picnic tables at Rock Creek, the only recreation related development in this segment is J.S. Burres State Park with two toilets and a primitive launch and parking area maintained by Oregon State Parks and Recreation Department. J.S. Burres State Park is adjacent to Cottonwood Bridge.

This segment has not been inventoried for campsites, but map surveys and general knowledge of the area indicate that there are approximately 30 places along the river that could be used for camping, approximately 10 of which are on public land.

Resource Uses

Agriculture

Growing wheat is the dominant agricultural use of this area, but it occurs on benches away from the river.

The agricultural use along the river is livestock grazing on both private and public lands. There are a few cultivated fields on private land along the river in this segment which are mostly used to grow hay. This segment contains twelve grazing allotments and a portion of the John T. Murtha Allotment (No. 02597), which continues into Segment 2 (See Table 36). They are small in both number of BLM acres and allotted animal unit months (one AUM represents one cow with calf or five sheep using an area for one month).

There are approximately 29.5 river miles in segment 1, and about one-fourth of the river frontage is public land. Most of the livestock grazing in this segment occurs on private land because of the small amount of public land contained in the grazing allotments.

Generally, livestock are authorized to use the public land in these allotments from early spring to late fall, with the exception of the Hay Creek Allotment (No. 02598) which has only winter use (Table 35). Some allotments are in use for up to eleven months. However, livestock normally use these allotments from early spring to early summer.

Except for some fences located in riparian and upland areas, there are very few range developments on public land. There are four spring developments on public land in the one allotment within the proposed Wild and Scenic River boundary. Much of the riparian areas are not fenced or separated from uplands in these allotments.

Riparian vegetation condition is being improved through recommendations made in individual allotment evaluations. These evaluations recommend grazing systems designed to improve riparian conditions.

Table 36: Grazing Allotments in Segment 1

Allotment		Category¹	Allotted AUMs	BLM Acres	Use Period
#	Name				
2560	Baseline	M	30	598	0416-1015
2513	Big Sky	M	60	1215	0401-1217
2520	Boynton	I	93	2596	0401-0930
2617	Emigrant Canyon	M	26	661	0316-1001
2648	Hartung	I	16	540	0301-1031
2598	Hay Creek	I	37	1518	1015-0228
2562	J Bar S	I	4	115	0401-1731
2597	John T. Murtha	I	155	4743	0301-0124
2594	Morehouse & Elliot	M	3	65	0301-0531
2595	Morris	I	53	833	0325-1031
2540	Persimmon Woods	C	5	40	0401-0901
2604	Philippi	M	60	942	0416-1015
2637	V.O. West	M	15	223	0401-0228
Total			557	14089	

¹ Grazing categories are defined in Glossary.

The Record of Decision for the Two Rivers Resource Management Plan (RMP) dated June 6, 1986, sets the following goals and objectives, which are significant to livestock management. These apply to river segments 1 through most of segment 5.

- 1) Maintain the present forage production and meet riparian and upland vegetation management objectives.
- 2) Manage riparian areas along the John Day River and major tributaries to full potential, with a minimum of 60 percent of the vegetative potential to be achieved within 20 years.
- 3) Manage upland vegetation to achieve maximum wildlife habitat diversity.
- 4) Manage all streams with fish or fish potential to achieve a good-to-excellent aquatic habitat condition.

The degree to which the RMP's goals and objectives are being achieved is being determined through an allotment evaluation process and reported to the public through published range-land program summaries or planning update reports. Each improve (I) and maintain (M) category allotment is being intensively evaluated by a team of BLM resource specialists. All I and M allotments in the Two Rivers Planning Unit should be evaluated by the end of 1994. Segment 1 allotments are scheduled for evaluation in 1993 and 1994. Some evaluations have been completed in other upstream segments. The process involves analysis of monitoring data

and any other information pertinent to each allotment. From this analysis, management objectives are formed for each allotment. The (I) category allotments are scheduled to be reevaluated within five years and (M) allotments within ten years after the first evaluation.

A comprehensive list of all grazing allotments within the John Day Basin, including information on vegetation conditions, may be found in the Two Rivers and John Day RMPs.

Recreation

Boating and fishing are the most popular recreation activities in this river segment. Here the river is at its widest so motorized boats are seen more often than in other segments. Tumwater Falls forms a barrier to boats between the Columbia River (Lake Umatilla) and this segment. Non-motorized boating also occurs but overnight campsites are not abundant due to the large amount of private land and difficult river bank topography. There are an estimated 10 campsites on public lands along this segment. The quality of these campsites has yet to be evaluated. Boaters can launch at Cottonwood Bridge and take out at McDonald. Reliable recreation use surveys have not been conducted for this segment but it is estimated that ten float parties and 30 power boat parties use this segment each year. It is believed that this use is increasing as fishing and boating become more restricted on other nearby rivers. Use of this segment is much lower than on other segments due to limited accessibility, less desirable scenery and less productive fishing efforts.

Fishing usually occurs from boats. Bank fishing is primarily limited to near Cottonwood Bridge and near McDonald. Some bank fishing occurs at Tumwater Falls by people who have boated to near the falls and hike the remaining distance. The state-managed public restrooms, parking, and launch area at J.S. Burres State Park (near Cottonwood Bridge) attract many visitors who are "just passing through". Boaters who have drifted the river from Clarno or Service Creek, exit the river at this point.

McDonald is an important recreation site on this river segment. It not only provides river access, but it is the historic site of the Oregon Trail crossing. Many visitors seek this site where portions of the Oregon Trail wheel ruts are still visible. Legal access is available by an unmaintained county road. Concrete posts on public land mark the location of the Oregon

Trail. No other facilities are provided at this site. Public use of this site is expected to increase as Oregon Trail sites become more popular points of interest for travelers.

Proposed Wild and Scenic Boundaries

The proposed Wild and Scenic River boundaries for this segment are shown on Map 7a .

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue the existing management situation. This means that use, especially boating use, would continue to rapidly increase with motorized boating showing the most rapid growth. No public boating facilities exist below Cottonwood Bridge. Float boaters exit the river at McDonald, often on private land without permission. Motorized boaters either enter the river at Cottonwood Bridge and exit the river at Cottonwood Bridge or on private land at McDonald. The only public facility in this segment is an Oregon Trail Ramada with interpretive signs at McDonald on the west side of the river.

This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.

Management Actions

Public Access

No new public access would be provided.

Facilities

No BLM facilities would be provided.

Information and Education

Basic visitor information would be provided as described in Management Common to All Alternatives.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.

Alternative B: More Use and Development

Alternative Described

This alternative would propose to acquire private land from a willing seller at McDonald and create visitor facilities there. Proposed facilities include a day use picnic area, campground, boat launch capable of accommodating motorized boats, and signs interpreting the Oregon Trail Crossing.

BLM would improve the BLM portion of Hay Creek Road and attempt to acquire the remaining portion of the road allowing public vehicle access to the river.

Signs providing visitor information would be installed at McDonald and Hay Creek Road.

Boating use would not be limited. This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.

Management Actions

Public Access

Existing public access at McDonald would be improved through cooperation with the Gilliam County Road Department and adjacent private landowners.

Private land would be acquired from willing sellers on the east river bank at McDonald; see "Facilities" below.

The BLM portion of Hay Creek road would be improved. An easement for the remainder of the road also would be acquired if the seller is willing to provide public vehicle access to the river.

Facilities

Easements or additional lands would be acquired from willing sellers to build a day use area and campground on the east bank at McDonald. The day use area would be designed to accommodate 10 vehicles and the overnight campground would accommodate 6 parties.

Easements or additional lands would be acquired from willing sellers to provide for a paved boat launch, to be constructed on the east bank at McDonald, to allow river access by large motorized boats.

Information and Education

An interpretive area would be constructed in association with the McDonald campground that would interpret the Oregon Trail. Other interpretation themes could be added and changed over the years. Information and direction signs would be installed on all road accesses to the river in this segment.

A boater information board would be installed at Cottonwood Bridge in cooperation with OPRD.

A visitor information board would be installed at the mouth of Rock Creek to provide information on public use ethics.

Boating Use Limits

No boating use limits would be imposed.

to motorized boating from May 1 to

from a willing seller at McDonald to

ed and a trailhead and parking area
he river on BLM land would be con-

Next two years and boating would be the two year period.

motorized boating from May 1 to October

improved and a trailhead and parking area
lands. A hiking trail crossing BLM-
at to the river.

from willing sellers on the east river bank

constructed on the east river bank at
picnic area would be coordinated with
would be designed to accommodate

S. Burres State Park in cooperation with

to interpret the Oregon Trail.

on public road access routes to this

Boating Use Limits

Boating use numbers would be collected during the next two years. Boating would be limited to 50 percent more than average annual use during the two year period.

Motorized Boating

Motorized boating would continue to be closed by OMB from May 1 to October 1.

Alternative D: Low Use and Development

Alternative Described

This alternative would seek to keep use at present low levels by providing no additional facilities and limiting boating use. Boating use numbers would be collected during the next two years. After this data is collected, boating use would be limited to the average annual use during the two year period.

BLM would seek to prohibit motorized boating in this segment.

Management Actions

Public Access

Same as Alternative A

Facilities

Same as Alternative A

Information and Education

Basic visitor information would be provided as described in Management Common to All Alternatives.

Boating Use Limits

Boating use numbers would be collected during the next two years and boating use would be limited to the average annual use during that two year period.

Motorized Boating

BLM would seek to prohibit motorized boating in this segment.

Alternative D: Preferred Alternative

Alternative C is the BLM preferred alternative for this segment, except that no action would be taken on Hay Creek Road and no limits on numbers of boaters would be imposed.

Environmental Consequences

NOTE: Where no negative impacts to a resource are expected from management actions, no statement will be made on that resource.

Air

One mile of road improvement and about 5 acres of facility construction proposed in Alternative B and about 3 acres of facility construction in Alternative C would temporarily increase dust at construction locations. Increased public access along Hay Creek road to the river, proposed in Alternatives B and C, would cause a slight increase in dust at that location.

Soil

Unlimited boating and providing no visitor facilities or controls proposed in Alternative A would cause a slight increase in bank erosion and sedimentation at popular recreation sites.

One mile of road improvement and about 5 acres of facility construction proposed in Alternative B and about 3 acres of facility construction in Alternative C would temporarily increase site-specific erosion at construction sites.

Short-term erosion would occur in association with the proposed trail construction at Hay Creek in Alternative C. This trail would be about 2 miles long.

Water

One mile of road improvement and about 5 acres of facility construction proposed in Alternative B and about 3 acres in Alternative C would cause a slight short-term increase in river sediment. Improved access would bring more use which would slightly increase sediment in the long-term. More use also would reduce riparian vegetation vigor at popular recreation sites. However, acquiring more public land could help to disperse use. An improved boat launch and allowing much more motorized boating use would slightly increase gas and oil residue in the river from motorized boats.

Installation of public information and interpretive signing in Alternatives B and C encouraging low impact use practices would help to reduce water degradation.

Increased use at McDonald, Hay Creek, and popular river recreation sites associated with facility improvements proposed in Alternatives B and C would cause a slight increase in sedimentation at these locations.

Continued unlimited boating as described in Alternative A eventually would cause a decline in vigor of riparian vegetation and a slight decline in water quality due to sanitation problems. However, continued limited public access (or restrictions to use on private lands) would slow the increase in public use. Water quality problems created by heavy use probably would not occur for several years.

Vegetation

Continued unlimited boating as described in Alternative A eventually would cause a decline in riparian vegetation condition. This situation would not be likely to occur for several years if public

access remained unchanged and facilities were not provided.

The amount and vigor of riparian vegetation would be reduced at proposed developed and popular undeveloped recreation sites with increased use as described in Alternatives B and C. About 3 to 5 acres would be affected by these developments.

Existing and proposed recreation use levels would not impact special status plants. No special status plants are known from this segment and any that may occur would most likely be found away from the river, on the steeper, more inaccessible hillsides away from the most likely areas of disturbance. *Rorippa columbiae*, if present, would occur along the riparian area and could be impacted by increased visitor use.

Fish

Continued unlimited boating proposed in Alternative A eventually would cause increasing fish mortality due to more people fishing.

Improved public access on one mile of road and 3 to 5 acres of facility development proposed in Alternatives B and C would increase public fishing opportunities, which in turn could reduce fish populations. During construction of proposed facilities, there would be a slight increase in site specific sedimentation. However, the total amount of sedimentation entering the river from this activity would be insignificant. An increase in motorized boating would cause small amounts of petroleum products to enter the river and could cause serious impacts to fish and riparian habitat.

Allowing motorized boating use only when the water flow is over 2000 cfs as proposed in Management Common to All Alternatives would reduce motorized boating disturbance of fish habitat.

Not allowing motorized boating as proposed in Alternative D would remove that source of impact to fish habitats.

Wildlife

The continued unlimited boating in Alternative A eventually would displace certain wildlife species intolerant to humans and critical riparian habitat quality would be reduced even further.

Alternatives A, B and C propose high or unlimited boating use. This level of boating use during April, May, and June would increase mortality of young waterfowl due to disruption of nesting and brooding. Disturbance also would occur but to a much lesser degree with Alternative D.

Improving public access on one mile of road and 3 to 5 acres of facility development would increase public use in Alternatives B and C which would displace some wildlife species and reduce riparian vegetation at popular sites.

Scenery

The gradual increase in use without signs and facilities in Alternative A would cause increased site damage and consequent deterioration of scenic values of recreation sites at McDonald and at other popular camping and stopping points along the river.

Acquisition of about 10 acres of private land along the river identified in Alternative B and about 5 acres in Alternative C would allow more control of visual resources in the future.

The 2 miles of Hay Creek Trail proposed in Alternative C would be partially visible from the river.

Facilities proposed at McDonald and Hay Creek in Alternatives B and C would be visible from the river as would associated visitor vehicles.

Cultural Sites

Improved public access proposed in Alternatives B and C would allow more visitors to reach historic and archeological sites. Signing would enhance visitor enjoyment of these, but increased public use expected with any alternative would increase discovery and the potential for vandalism.

Grazing

The potential large increase in boating use in Alternatives A and B would cause reduced riparian vigor at popular recreation sites, causing a slight decline in available forage.

Construction of 3 to 5 acres of visitor facilities proposed in Alternatives B and C would reduce available forage by a negligible amount at construction locations. No AUMs would be lost. Increased use could result in increased conflict with livestock or vandalism to livestock facilities.

Recreation

Alternative A would allow the continued gradual increase in recreation use. Eventually, boating use in this alternative could increase to very high numbers.

Improved access and 3 to 5 acres of new facilities in Alternatives B and C as well as acquisition of about 5 to 10 acres of certain private land parcels would increase public use at a greater rate than with Alternative A, but eventually there would be a cap on boating use. Limiting boating use as described in Alternative D would slightly improve riparian vegetation in some locations and provide a more primitive experience as sought by some recreationists.

Motorized boaters who presently use this river segment would be forced to seek another river for their activity if Alternative D restrictions are imposed. Other locations for this activity are limited in this region.

BLM LIBRARY
R5150A BLDG 50
FBI/DOJ RECORDS CENTER

Recreation Experience

The type of the recreation experience would change over the years with Alternative A as use increased without the controls provided by visitor facilities and signs. After several years, the boating experience would change from the present situation where other boaters are seldom encountered to a situation where other boaters are almost always visible.

Improved access and increased facilities in Alternative B would increase public use. Increased public use is perceived by some as detracting from the aesthetics and enjoyment of the area. However, increased public use is perceived by others as an enhancement of their visit, giving them a feeling of more comfort and security as long as crowding is not occurring.

Improved access proposed in Alternatives A and B might also help to better disperse use, providing more opportunities for solitude while visitation is still low. Acquisition of about 5 to 10 acres of identified private parcels would allow BLM more control of activities on those lands which could stabilize aesthetic values of the area.

Increased vehicles and motorized boating would increase noise levels. Interpretive signing would enhance the experience of most visitors.

Improved access and a boat launch would make it easier for larger recreational equipment such as boat and horse trailers to reach the area.

Facilities proposed in Alternatives B and C would provide new opportunities for picnicking and day use in an area with tables, toilets and signs. These proposed facilities would require some disturbance on 3 to 5 acres.

Installation of facilities on 3 to 5 acres at McDonald proposed in Alternatives B and C would enhance visitors experience by allowing them greater comfort in knowing where they can recreate without trespassing on private land. The confluence of Hay Creek and the John Day River would receive increased use due to the improved access proposed in Alternatives B and C. An increase in boating use would change the present boating experience. Boaters seeking a more remote and primitive setting would be displaced.

Alternative D, and to a lesser extent Alternatives B and C would limit boating use at some point. This would change the experience because boaters would have to apply for a permit and sometimes be denied. Permittees would experience less crowded conditions than those expected under Alternative A.

Information and interpretive signing proposed in Alternatives B and C would provide orientation for visitors and a means for them to better enjoy historic and cultural sites.

Guides and Outfitters

The situation for guides and outfitters in Alternative A would not change from the present situation in the short-term. In the long-term, unlimited boating numbers would reduce the quality of the

recreation experience for clients.

Improved access, facilities and more public land proposed in Alternative B might attract more guided and outfitted services to this segment. Proposed facilities would make this segment even more popular during low flow conditions when there is more water in this segment than in any other part of the John Day System.

Improved public access and facilities as proposed in Alternative C might attract more guided and outfitted services to this segment. This could occur especially during low flows when this river segment has more water than other segments.

Boating use limits proposed in Alternatives B, C and D eventually could affect guides by capping the number of guides permitted, limiting guided trips or the number of clients.

Social and Economic Conditions

Unlimited boating and increased visitation without additional signs and other public use controls at McDonald as proposed in Alternative A would increase visitor conflicts with local private land owners.

An increase in visitor use in Alternatives B and C would have no significant impact on economic conditions of the area. However, people residing at or near McDonald and Hay Creek would see a significant increase in visitors over time.

Public Services

The large increase in public use and continued lack of information signs in Alternative A would create a greater need for law enforcement and emergency services. Public services of this kind are extremely difficult and expensive to provide in this remote area. Local communities have limited capabilities to provide emergency services and law enforcement.

Requiring day use only of facilities proposed at McDonald would be extremely difficult and expensive to enforce in this remote location. Allowing camping at this location also would create a law enforcement need where none previously existed.

A system to eventually limit the numbers of boats as proposed in Alternatives B, C and D would be delayed indefinitely if its implementation would occur only when boating congestion compromised boating safety. If and when boating use limits are imposed, the system would have to be designed and implemented at considerable expense.

Alternative C would result in a moderate increase in recreational use of this river segment. This would cause a gradual increase in the need for emergency services and law enforcement. Local communities have limited capabilities to respond to this increased need which is difficult and expensive to provide in this remote area.

Segment 2: Cottonwood Bridge to Butte Creek**Affected Environment***Overview***Location and General Description**

This river segment begins at Cottonwood Bridge on State Highway 206 and winds 57 miles upstream in a southerly direction to the confluence at Butte Creek. This segment is well known for its spectacular scenery. It contains very high canyon walls for its entire length and is very remote. There is no public road access for the entire length. Even Butte Creek is not a public road access. There are three Wilderness Study Areas in this river segment.

River Characteristics

The hydrologic characteristics of this segment are similar to those in all segments within the lower basin. Discharge patterns, peak flows, and duration are comparable with Segments 1 and 3 except that the river meanders more in this segment.

Butte Creek, Thirtymile Creek, and Pine Hollow Creek are the significant tributaries to this segment. Butte Creek forms the boundary between Segments 2 and 3. Its flow averages from one to five cfs from July through October.

Water quality of this segment is impaired due to stream bank erosion and sedimentation. In addition, Condon and Fossil municipal sewage treatment facilities have been discharging poor quality effluent into Thirtymile and Butte Creek, respectively (OWRD 1986). Oregon DEQ is pursuing correction of problems at both facilities.

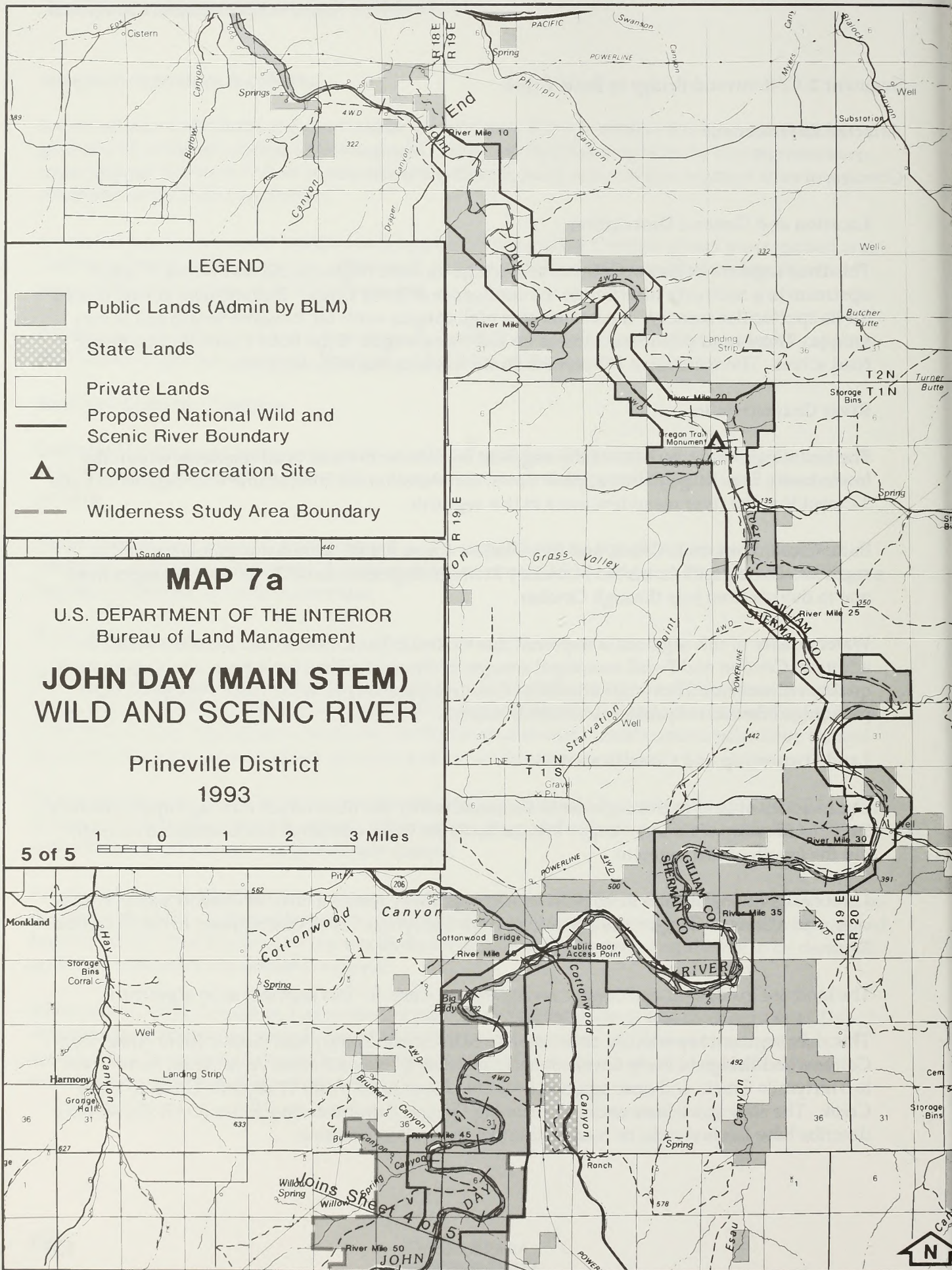
Land Ownership and Classification

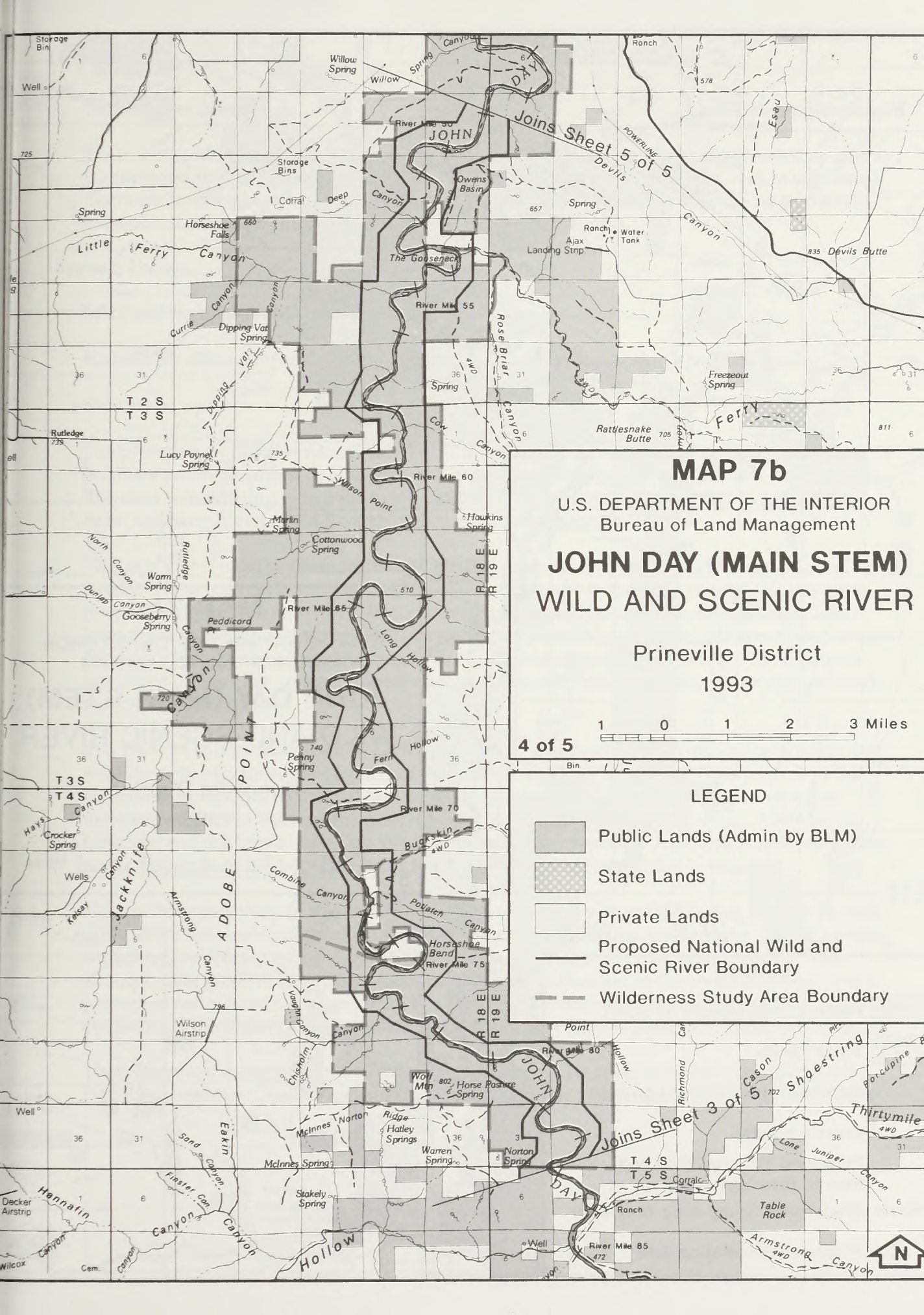
The majority of land in this segment is administered by the BLM which manages approximately 50 of the 57 miles of river frontage. Private lands are in several small tracts scattered throughout the length of this segment.

Land designations include three BLM Wilderness Study Areas, a State of Oregon Scenic Waterway, and a State of Oregon wildlife refuge from Thirtymile Creek downstream to the Columbia River.

The land use guidelines and county zoning are the same for this segment as in segment 1.

This river segment is presently classified as a State Scenic Waterways "Scenic River Area" from Cottonwood Bridge to Ferry Creek. It is classified as a "Natural River Area" from Ferry Creek to Thirtymile Creek, and once again as a "Scenic River Area" from Thirtymile Creek to Butte Creek. The state guidelines under the existing Oregon Administrative Rules (OAR 736-40-065) describe how lands should be managed under these classifications.



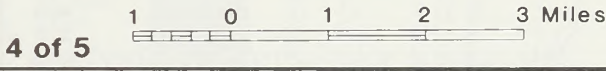


MAP 7b

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

**JOHN DAY (MAIN STEM)
WILD AND SCENIC RIVER**

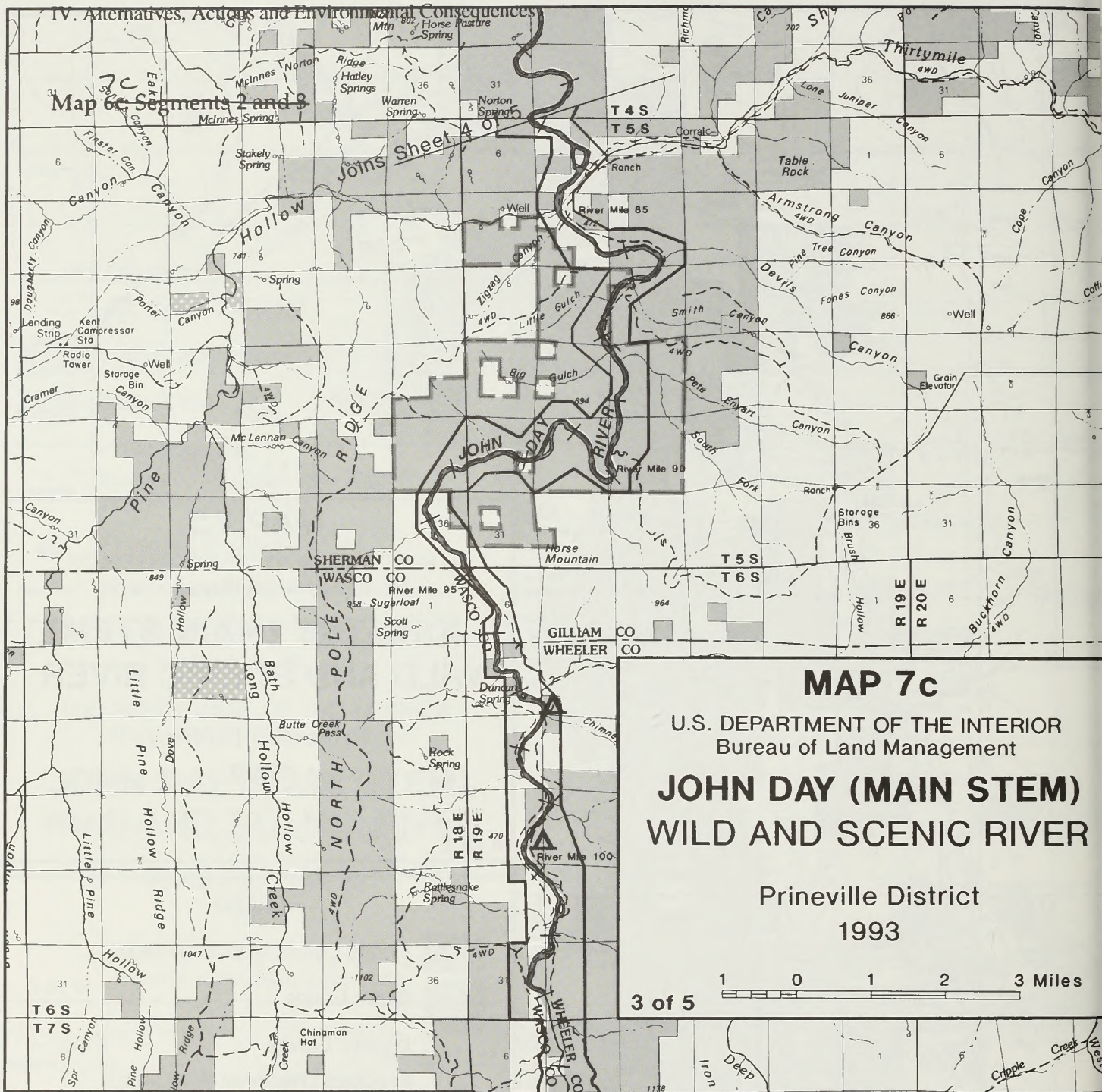
Prineville District
1993



LEGEND

- Public Lands (Admin by BLM)
- State Lands
- Private Lands
- Proposed National Wild and Scenic River Boundary
- Wilderness Study Area Boundary

Map 6c Segments 2 and 3



MAP 7c

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

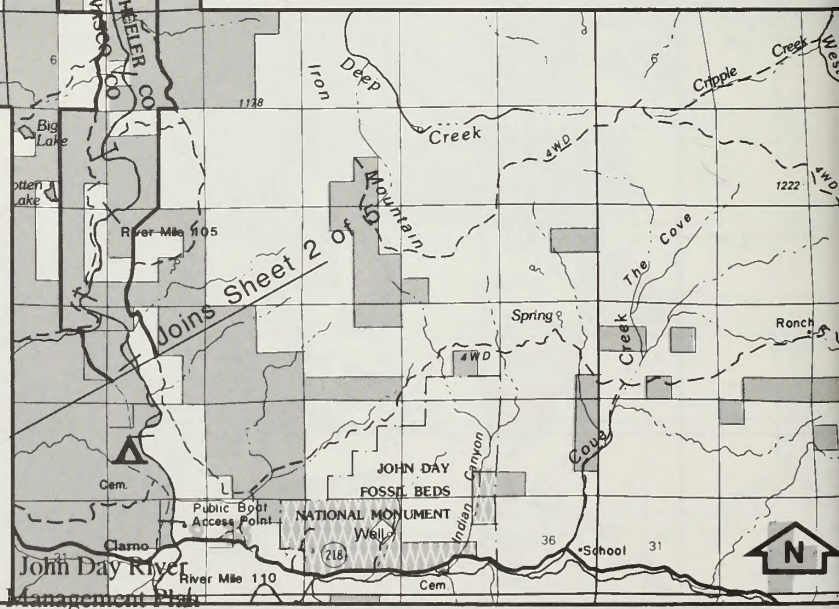
JOHN DAY (MAIN STEM) WILD AND SCENIC RIVER

Prineville District
1993

3 of 5 1 0 1 2 3 Miles

LEGEND

-  Public Lands (Admin by BLM)
-  State Lands
-  National Park Service Lands
-  Private Lands
-  Proposed National Wild and Scenic River Boundary
-  Wilderness Study Area Boundary
-  Proposed Recreation Site



Public River Access

There is no public road access to the river within this segment. Public road access exists only at Cottonwood Bridge and at Clarno, located 12.5 miles upstream from Butte Creek in segment 3. There are forty-eight miles of primitive private roads which pass to or near the river in a few locations, including Butte Creek, Thirtymile, and Ferry Canyons.

Resource Values

Wild and Scenic River Designation

Refer to the discussion on this subject in Segment 1, **Wild and Scenic River Designation**.

Scenery

The primitive and largely natural scenery of this segment provides river visitors with a sense of wildness and remoteness. It is an area of high plateaus bisected by the river and its tributaries. The river winds through majestic basalt cliffs that reach heights of over 1,000 feet above the river, and steeply sloped hills covered with grass and sagebrush.

This segment is most known for the high basalt canyon walls which occur through most of its length. These high cliffs are impressively scenic, especially in the early morning or late afternoon when lighting is at its best. In contrast to the rugged, golden hills, riparian vegetation laces the river's edge and rocky side canyons with a beautiful green hue. Scattered juniper trees produce a sprinkling of color and fragrance. Erosion and oxidation of some of the basalt columns and pillars have created interesting formations and colors that have become scenic landmarks for river visitors.

In a 1983/84 survey conducted by OPRD, most river users indicated that solitude, scenery and wildlife were very important aspects of their visit to the John Day River. This portion of the mainstem exemplifies those qualities. Several stretches of this segment received previous national recognition through the designation of three Wilderness Study Areas. Additionally, Congress and the Lower John Day Wild and Scenic River Resource Assessment determined the scenic resources of the John Day River to be an outstandingly remarkable value.

Signs of human activity in this segment are either temporary or not significant enough to seriously affect the scenic values and are mostly products of ranching and farming. These include such things as fences, spring developments, livestock, irrigation pumps, and a few private airstrips and primitive dirt roads. Highway 206 crosses the river at Cottonwood Bridge and a powerline can be seen for approximately 4 miles from Devil's Canyon to Cottonwood. Some evidences of the underground pipeline and a fiber optics line are present at Thirtymile Canyon.

There are seven designated military overflight routes which cross or closely parallel the John Day River between Cherry Creek and the Columbia River. There are two more military routes

which cross the river at Kimberly. The types of aircraft vary, as do the allowed elevations of flight. In addition, privately-owned aircraft occasionally fly over the John Day, sometimes at very low elevations.

Vegetation

As in segment 1, the limited riparian vegetation in this segment of the John Day is composed primarily of grass/sedge communities. The occurrence of shrubs, while still occupying less than 1% of the riparian area, does increase in this segment with willow, alder, mockorange, and Siberian elm found in isolated clumps. Willow stands are increasing, particularly on alluvial fans at the mouths of tributaries. Vegetative streamside canopy is low, but as willows or other riparian shrubs increase, that habitat feature will improve. There is a fair potential for extensive stands and scattered clumps of trees and shrubs. Wetland habitats represented by emergent aquatic vegetation are nearly nonexistent. Eroding river banks and associated bare soils occur on about 25% of the river banks. Present overall wildlife habitat conditions and quality are rated poor, due to an overall lack of riparian vegetation diversity and habitat structure.

One special status plant, *Cryptantha rostellata*, is known to occur in this segment. *Astragalus collinus* var. *laurentii* and *Rorippa columbiae* are suspected.

Fish

This segment also serves primarily as a migration corridor for adult and juvenile anadromous fish. Thirtymile Creek and Butte Creek provide some anadromous fish spawning habitat. Butte Creek is important for improving water quality in the Mainstem John Day due to its colder water temperatures (Claire 1991). Pine Hollow Creek historically provided spawning habitat for steelhead prior to the construction of the PGT gas transmission pipeline. It may still produce steelhead on an intermittent basis. Local residents have observed adult steelhead "schooling" near the confluence of Pine Hollow Creek and the John Day River, perhaps in an attempt to move into the tributary (Young 1991). Two other tributaries in Jackknife and Little Ferry Canyons also may still produce steelhead on an intermittent basis, but direct observations have not been made. Productivity of smallmouth bass in this segment is considered to be excellent (Claire 1991).

Wildlife

The majority of this segment is designated as a State of Oregon Wildlife Refuge. It is critical waterfowl habitat, especially for Canada geese that occupy this segment year-round. Wildlife diversity and occurrence within segment 2 is quite similar to Segment 1, with a slight increase due to increased occurrence of shrub communities and increased habitat features such as cliffs and more pronounced canyon formations. The same wildlife species found in segment 1 occur in this segment, with additional representative species being prairie falcons, violet-green swallows, canyon wrens, redtail hawks, and flickers. In addition, California bighorn sheep have been reintroduced into this segment of the John Day.

Cultural

Polk (1976) conducted an intensive cultural inventory of portions of this segment. Within this particular stretch of the river Polk recorded 59 prehistoric and 9 historic sites. An additional 5 prehistoric sites have been located since that time. Others are expected to exist but have yet to be discovered. Site types recorded include pit house villages, isolated pit houses, rockshelters, lithic scatters, pictographs and petroglyphs, rock features, homesteads, a ferry site, irrigation canals, ranching line shacks, a still site from prohibition days and the burned remains of three buckboard wagons used in a 1928 movie about the Oregon Trail. The nature of several of the prehistoric sites is undetermined because they are buried by river sediments. Many of the sites are in good condition, but those nearest to access points, and a few which are not, have been badly damaged by vandals. No formally reported cultural resource excavations/studies have been conducted within this segment.

Ethnographically, the area was utilized by the Tenino group of the Sahaptian-speaking language family. Little is known about them. Few of the ethnographic studies mention the use of the canyon specifically. It is assumed that the fisheries played an important role in the occupation of the canyon. Observable evidence, however, suggests that hunting and gathering were as important, if not more so. No known ethnographic villages have been identified in this segment. Current use of the canyon by the Tenino or other Native American groups is unknown.

Paleontology

This segment is considered to have low potential for both vertebrate and non-vertebrate fossils. The segment has not been inventoried for paleontological resources, but the south end is near the Clarno Unit of the John Day Fossil Beds National Monument.

Recreation

The majority of land adjacent to this segment of the river is primitive and undeveloped. *Oregon River Tours*, a guidebook for Oregon rivers, states that the lower John Day River rates high on the list as a "scenic desert wilderness river tour" (Garren, 1979). This description is especially applicable to segment 2. The river flows through Thirtymile, Lower John Day, and North Pole Ridge Wilderness Study Areas, covering about two-thirds of this segment. The primitive setting and largely natural scenic viewshed provide river visitors with a sense of wildness and remoteness. About a dozen primitive dirt roads reach the river in this segment but, other than at J.S. Burres State Park, there is no legal public road access. Primary public access is by boating on the river. There are no recreation facilities provided in this segment, however, the boat ramp at J.S. Burres State Park is available for upstream or downstream travel.

Primary recreational opportunities are for boating, camping, hunting, fishing, photography, swimming, hiking, and wildlife watching. Artifacts and vertebrate fossils are protected under the Antiquities Act and collection is not permitted. There are 178 known sites suitable for camping, with approximately 100 of these being on public land.

This segment is popular for long boating and fishing trips. There are many Class I and II rapids and one Class III (Basalt). However, most boaters begin floating in segment 3, which requires them to run (or portage) the Class IV Clarno Rapids.

In addition to being a part of the National Wild and Scenic River and State Scenic Waterway, this segment contains part of the John Day River Wildlife Refuge. No waterfowl hunting is allowed inside the Refuge. Motorized boat use also is prohibited in this segment between May 1 and October 1.

Wilderness

There are three Wilderness Study Areas (WSA) along the John Day River in this segment.

The North Pole Ridge WSA consists of 6,369 acres. Further north along the main stem is Thirtymile WSA consisting of 7,538 acres and Lower John Day WSA with 19,587 acres. The boundaries of these WSAs are shown on maps 6b and c.

Detailed Wilderness inventory information on each of these WSAs is available from the BLM Central Oregon Resource Area Office in Prineville.

Final wilderness recommendations have been submitted to Congress for eventual Congressional action. The BLM recommended that the three WSAs in this segment are suitable for wilderness designation. Until the wilderness review process has been completed, these areas will be managed so as not to impair their suitability for protection as wilderness. The management of the WSAs is discussed in detail in the *BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review* dated November 10, 1987.

Resource Uses

Agriculture

There are some cultivated fields on private lands near Butte Creek and Cottonwood Bridge. However, the major agricultural use of this segment is livestock grazing.

Segment 2 contains 13 grazing allotments and a portion of Allotment No. 02597 which is primarily located in segment 1. They vary in size from 343 acres to 12,597 acres of BLM-administered land (Table 37). This segment contains the greatest concentration of public land per river mile along the John Day River. The authorized period of livestock use varies widely from two and a half months to 12 months with an average of six and a half months. Presently, use occurs on all these allotments beginning in the early spring, with most ending by mid-July and the remaining ones by early September.

One of the 13 allotments in this segment has fences in place for the control of livestock use in the John Day River riparian zone. Two small areas within this fenced riparian zone show improved vegetative condition. Few range developments exist on public land except for fences.

Table 37: Grazing Allotments in Segment 2

Allotment		Category¹	Allotted AUMs	BLM Acres	Use Period
#	Name				
2509	Belshe	I	62	1840	0401-0614
2538	Decker	I	206	2999	0416-1014
2636	George Weedman	C	6	343	0416-1015
2521	Horseshoe Bend	I	43	737	0701-0901
2522	James Brown	I	66	2527	0501-1031
2597	John T. Murtha	I	128	3925	0301-0124
2572	Laffoon & Carlson	I	85	3655	0601-1031
2591	Miller	I	47	1896	0510-1031
2581	Pine Creek	I	346	5418	0416-1117
2608	Rattray	I	312	8434	0325-0228
2619	Sid Seale	I	708	12597	0301-0228
2629	Tatum	I	113	2889	0516-1019
2553	Willow Spring	I	20	1127	0401-0831
Total		2142	48387		

¹ Definitions of these categories are found in Appendix.

Seven draft and four final grazing allotment evaluations have been completed in this segment. All allotment evaluations in this segment should be completed in 1993. All these evaluations have a common grazing management recommendation to change the livestock use period to March 1 to May 1. This applies to land being grazed along the John Day River and its tributaries and will be part of all allotment evaluations with John Day River frontage in Segments 1 through 3. Other public lands in these allotments may be grazed outside of the March to May time period. One objective in all of the evaluations is to improve riparian and fishery habitat by establishing approximately a ten percent cover of woody riparian vegetation along the John Day River within ten years. This objective will be in all of the evaluations that have public land on the John Day River in the first three segments. Four allotments have additional objectives to improve both riparian and fishery habitats in three perennial streams which flow into the John Day. These streams are Little Ferry, Pine and Ferry Creeks.

There is an additional riparian and fishery objective for Jackknife Creek although the water only flows to the river for a short time during the spring of the year.

Recreation

The primary recreation use of this segment is for boating, camping, and fishing. Rafting, kayaking, drift boating and canoeing are highly popular forms of watersports in this portion of the river. This is especially true during late spring and early summer when optimum weather

and ideal river flows overlap. Most float trips begin at Clarno Bridge in segment 3 or at Butte Creek in segment 2 and last from three to five days. The float trip in this segment travels through the most primitive setting on the John Day River. Very few agricultural or other man-made structures are visible from the river. Motorized boat use is prohibited in this segment between May 1 and October 1.

Visitor use surveys conducted in 1988 through 1991 showed a slight increase in use each year. There was an estimated total of 3870 visitor use days in this segment in 1991. A visitor use survey conducted in 1984 estimated a total of 2316 visitor use days. Commercial outfitter use totaled 8 companies spending 79 days on this portion of the river in 1990 and 9 companies spending 109 days on this portion of the river in 1991.

Some hunting occurs along this river segment but it is highly constrained due to the limited public access. Hunting seasons run from September through mid-January for waterfowl/upland birds and from October through November for the various deer seasons, accounting for an approximate total of 7200 visitor use days annually. Legal fishing seasons extend from May 23 through October 1 for trout and the entire year for salmon, steelhead, and other fish.

There are three Wilderness Study Areas (WSAs) in this river segment but they receive little recreation use and have no developed trails. No recreation facilities are provided in this segment. A campsite inventory conducted in 1990 revealed 178 potential undeveloped campsites along this stretch of river, about 100 of which are located on public land.

Proposed Wild and Scenic Boundaries

The proposed Wild and Scenic River boundaries for this segment are shown on Maps 7a, b and c.

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue the existing management situation. Boating use would continue to rapidly increase and no facilities would be provided. Almost all existing use now is boating trips which include two or more nights of camping. BLM would continue river patrols which include litter removal. Popular campsites would receive increasing use.

Motorized boating would continue to be prohibited by OMB between May 1 and October 1.

Management Actions

Public Access

No new public access would be provided.

Facilities

No public facilities would be provided.

Information and Education

Basic visitor information would be provided as described in Management Common to All Alternative. The existing brochure provided by BLM to boaters and anglers would be updated.

Boating Use Limits

Boating use limits would not be imposed.

Motorized Boating

Motorized boating in this segment would continue to be prohibited by OMB between May 1 and October 1.

Alternative B: More Use and Development

Alternative Described

This alternative would accommodate the highest reasonable use levels for this segment. BLM would seek new public vehicle access to the river in six locations and numbers of boaters would be limited only by the number of available campsites. BLM would also seek to construct a minimum facility recreation site, to include camping, at the mouth of Butte Creek, and provide public information bulletin boards at all newly acquired public vehicle access sites.

This segment would continue to be closed by OMB to motorized boating from May 1 to October 1.

Management Actions

Public Access

Public road easements would be acquired from willing sellers at Butte Creek, Thirtymile Creek, Pine Hollow, Sorefoot Creek, Buckskin Canyon, and at Penny Spring. See Map 6a, b and c. These easements would total about 25 miles.

Facilities

A primitive recreation site would be constructed at the mouth of Butte Creek if public access to the site could be acquired. The site would provide a boat launch, large parking area, tables, toilets and a limited number of campsites.

Information, Education, and Interpretation

Information bulletin boards would be provided at all public river access points listed in Public Access above, if and when legal public access is acquired.

Boating Use Limits

The number of boaters would be limited by the maximum number of available campsites.

Motorized Boating

The existing OMB closure to motorized boating would continue between May 1 and October 1.

Alternative C: Moderate Use and Development

Alternative Described

This alternative proposes to seek public vehicle access to the river at two new locations. Public informational bulletin boards would be provided at these new access points. No other facilities would be provided.

Boating use would be allowed to increase to a level where 75 percent of available campsites are occupied each night.

Management Actions

Public Access

Public road easements would be acquired from willing sellers at Butte Creek and Thirtymile Creek to provide access to the John Day River.

Facilities

No visitor facilities would be provided.

Information and Education

Information bulletin boards would be provided where visitors encounter the John Day River at Butte Creek and Thirtymile Creek, if public access is acquired from willing sellers.

Boating Use Limits

Boating use would be allowed to increase to a level where 75 percent of available campsites would be occupied.

Motorized Boating

Motorized boating would continue to be prohibited by OMB between May 1 and October 1.

Alternative D: Low Use and Development

Alternative Described

This alternative would seek to manage for the lowest reasonable use levels. No additional public vehicle access or facilities would be provided by BLM. Access to this segment would be by boat launched at Clarno or above.

Boating use would be limited to where boaters occupy 50 percent of available campsites during peak periods and 20 percent during non-peak periods between April 1 and October 1. All boating would be prohibited between November 1 and March 1.

BLM would seek to prohibit motorized boating.

Management Actions

Public Access

No public easements or developments would be sought.

Facilities

No facilities would be provided.

Information and Education

Visitor information would be provided only as described in Management Common to All Alternatives.

Boating Use Limits

Boating use would be limited to a level where boaters would occupy 50 percent of available campsites during peak periods and 20 percent during non-peak periods. All boating use would be prohibited between November 1 and March 1 to protect wintering waterfowl, especially Canadian geese.

Motorized Boating

No motorized boating would be allowed.

Alternative E: Preferred Alternative

Alternative D is the agency preferred alternative.

Environmental Consequences

Air

Acquiring about 25 miles of public vehicle access (about 3 miles within the proposed Wild and Scenic boundary) at six locations described in Alternative B would cause a temporary increase in dust as these roads are improved and subsequently used. Alternative C, which would increase vehicle access only at Butte Creek and Thirty Mile Creek, would cause less dust than Alternative B.

Water

Acquiring about 25 miles of public vehicle access at six locations described in Alternative B would cause a slight increase in stream sedimentation at these locations due to increased public use. Sedimentation would increase slightly at two sites in Alternative C where about 12 miles of acquisition of public access is proposed.

Allowing boating use to increase to levels at which all available campsites are occupied, as proposed in Alternative B, would greatly increase the use of the riparian zone for camping and boater rest stops. This use would reduce the vigor and amount of riparian vegetation and would slightly increase sedimentation.

Allowing boating use as described in Alternative D would best protect riparian vegetation.

Sanitation and other public use-related problems could slightly degrade water quality at the two sites where public access is proposed in Alternative C and at the six sites where access is proposed in Alternative B. Information boards proposed in Alternatives B and C could help encourage no trace camping practices which would minimize degradation of water quality.

Large numbers of boaters as accommodated in Alternatives A, B and C, would result in an increase in sedimentation and a reduction in the vigor of riparian vegetation at popular recreation and camping sites. Unrestricted numbers of motor boaters in Alternative A during the allowed period would contribute traces of petroleum products into the water.

Vegetation

Unrestricted numbers of boaters proposed by Alternative A would reduce riparian vegetation vigor at popular camping and recreation sites as numbers increase.

Increasing public access and allowing boating to increase as proposed in Alternative B would reduce the vigor and amount of riparian vegetation in popular locations. Alternative D which proposes no new access and the lowest boating use numbers would provide the most riparian vegetation protection.

Acquiring about 12 miles of new public access in two locations as proposed in Alternative C would increase public use and reduce riparian vegetation vigor at popular camping and recreation sites. Proposed information boards would assist in informing the public about practices which reduce impacts to vegetation. Existing and proposed recreation use levels would not impact special status plants in this segment. *Cryptantha rostellata* is not found in areas which would be impacted by boater use. *Rorippa columbiae*, if present, would occur along the riparian area and could be impacted by increased visitor use. Any others that may occur would most likely be found away from the river, on the steeper, more inaccessible hillsides away from the most likely areas of disturbance.

Fish

Fish mortality would increase in proportion to the increasing number of people fishing. Many parties floating the river fish almost continuously throughout the trip. Enforcing fishing regulations in this remote canyon is extremely difficult.

Unrestricted boating proposed in Alternative A would cause increased fish mortality when the number of boaters reached significantly higher levels. Restricted boating as described in Alternative D would provide the least fish mortality due to fishing.

Increased public access and greatly increased boating as proposed in Alternative B also would increase fish mortality from recreational fishing. But limiting boater numbers as proposed in Alternatives B and C would limit fish mortality problems accordingly. Information boards could be used to increase public awareness of fisheries issues such as catch and release and native vs. non-native fish. Increased public awareness would help to reduce adverse impacts to fish.

Wildlife

Unrestricted numbers of boaters proposed in Alternative A eventually would displace raptors, nesting waterfowl and other species intolerant to human presence. Large numbers of boaters between April and June would disturb some nesting and brooding waterfowl, causing waterfowl mortality. Reduced riparian vegetation vigor at and near popular recreation and camping sites would reduce available wildlife habitat.

Increased public access to six locations and more boaters as proposed in Alternative B would place more people in the critical wildlife habitat of the riparian zone. This would displace some wildlife species which are intolerant to man and cause a decline in vigor of riparian vegetation at popular recreation sites.

Significant disruption to nesting and brooding waterfowl would occur from increased boating use and motorized boating proposed in Alternative B. Significant disruption from April 1 to June 30 would result in a significant increase in mortality of young waterfowl.

Increased public access at two locations proposed in Alternative C would slightly reduce riparian vigor in the most critical wildlife habitat. The substantial increase in boating use and slight increase in non-boating use would displace some wildlife species. Raptors nesting on the river would move to locations off the river. Increased boating from April through June would disrupt some nesting and brooding waterfowl. This disruption would cause increased mortality of young waterfowl.

Limiting the number of boaters as proposed in Alternative D would reduce human disturbance and competition for riparian habitat, protecting wildlife use of the riparian zone.

Scenery

Recreation sites receiving increased use from unrestricted boating as proposed in Alternative A would be denuded of vegetation and would be visible from the river.

Acquisition of about 25 miles of public access easements at six locations in this segment as proposed in Alternative B and two locations in Alternative C would cause more vehicles, people, campsites, and litter to be visible from the river.

No new public access and lower boating use would cause the least disturbance to scenic quality.

The proposed increased boating use levels in Alternative B and C would cause more people and boats to be visible along the river. Vehicles also would be visible to boaters at the two proposed public access points proposed in Alternative C and at the six access points in Alternative B.

Cultural Resources

Unrestricted numbers of boaters resulting from Alternative A eventually would reach levels where most cultural sites would be discovered, disturbed and/or destroyed.

Increased public use and access proposed by Alternative B would increase discovery of cultural sites. Increased awareness of cultural sites could increase site disturbance and vandalism.

No new public access and lower boating use levels described in Alternative D would likely sustain the current levels of vandalism and disturbance of cultural sites.

Alternative C proposes to increase boating use and public access at two locations and would cause increased discovery of cultural sites. Increased awareness of cultural sites could result in more site disturbance and vandalism.

Grazing

Unrestricted numbers of boaters resulting from Alternative A would substantially reduce riparian vegetation at recreation sites along the river. This would slightly reduce available livestock forage.

Overnight camping facilities on about 3 acres at Butte Creek as proposed in Alternative B would cause a reduction in vegetation on that specific site.

Alternative C would cause a slight reduction in available forage at popular camping sites along the river due to increased boating use and public access.

Alternative D would cause little change in available forage at popular camping and recreation sites along the river.

Recreation Use

Alternative A would cause recreation use levels to continue to increase based solely on public demand. Boating use is increasing in spite of limited access in this segment. All desirable or adequate campsites would be completely occupied in peak periods within approximately five years if boating use is allowed without further restrictions.

Alternative B is expected to cause a significant increase in public use of this river segment. The present low use levels are due to the lack of public access and lack of knowledge of this area by the general public. Public access to this river segment is provided only by floating the river. However, Clarno Rapids deters many beginning boaters due to its well-deserved reputation as a dangerous impediment. A boat launch and public access at Butte Creek would eliminate this natural hazard for boaters who choose to avoid it. The ability to avoid Clarno Rapids, allowing boating use to increase to campsite saturation, and adding six public access points, would quickly and significantly increase use throughout this segment.

The cap on boating use described in Alternative C would be reached in a short period of time, especially if public access were provided at Butte Creek and Thirtymile. Non-boating use would increase greatly at the two proposed public access points.

Recreation Experience

Unlimited boating growth proposed in Alternative A would change the present primitive experience where other boaters are seldom encountered to an experience where other boaters are often encountered, especially during peak use periods. The rate of change would correspond with the rate of boating use increase.

The substantial increase in boating accommodated by Alternatives B and C and the proposed recreation site on about 3 acres at Butte Creek also would change the existing primitive experience to a semi-primitive experience. Types of activities would not change.

Boating use restrictions proposed in Alternative D, and eventually for Alternative B and C, would cause competition and waiting periods for the limited number of permits available. These restrictions would help to maintain the primitive experience.

Guides and Outfitters

Unrestricted boating use proposed by Alternative A would change clients' experiences as described in Recreation Experience above. Desirable camping locations would become less available with increased boating use.

Increased access proposed in Alternative B would provide guides and outfitters with easier access and more varied choices of river distances to float. However, most guides and outfitters are not deterred by Clarno rapids and are presently able to offer a unique several-day float in a wilderness setting. This alternative would significantly change this recreation experience as described above.

Boating use limits proposed in Alternatives B, C and D eventually could affect guides by capping the number of guides permitted, limiting guided trips or the number of clients.

The increase in boating use proposed by Alternative C and increase in public access in two locations would create greater competition for popular camping sites but otherwise have little effect on guides and outfitters.

Social and Economic Conditions

The few people residing along this river segment live there only in the summer. Significant increases in public use resulting from Alternatives A and B would substantially change the social setting for these people during early summer. The change would be from living a remote lifestyle, seldom encountering people, to encountering many people each day.

Increases in visitor use from Alternatives A, B and C would enhance businesses in Condon and Fossil which are related to recreation, such as shuttle services, gas stations and restaurants.

Public Services

Alternatives A, B and C would allow increased boating. Alternative A probably would allow the most increase in the shortest time. Alternative B would have a cap on use but only after high numbers were achieved. Alternative C also would cap boating use after a moderate increase in use. Alternative D would require a boating permit system to be imposed more quickly than in Alternatives B and C.

The proposed increased boating would cause a corresponding increase in the need for emergency services and law enforcement which local communities are unable to provide.

Imposing boating use limits as in Alternatives B, C and D would require a use allocation system to be selected and a permit system to be designed and imposed. These efforts would be urgently needed for Alternative D which proposes the most immediate boating use limitations.

Maintenance of facilities proposed in Alternative B would be required. Maintenance of about 25 miles of new road in Alternative B and about 13 miles in Alternative C would also be required.

Segment 3: Butte Creek to Service Creek

Affected Environment

Overview

Location and General Description

This segment begins at the confluence with Butte Creek and winds 60 miles upstream to the confluence with Service Creek. This entire segment is designated as a State Scenic Waterway and Federal Wild and Scenic River, as are segments 1 and 2. The Federal Wild and Scenic River designation ends at Service Creek, but the State Scenic Waterway extends upstream to Parrish Creek. This segment contains wide valleys with high, colorful hills and rimrock in some areas. The entire segment frequently contains agricultural lands, especially hay fields and pastures. This segment is in a remote setting but roads and man-made structures are more numerous than in segment 2.

River Characteristics

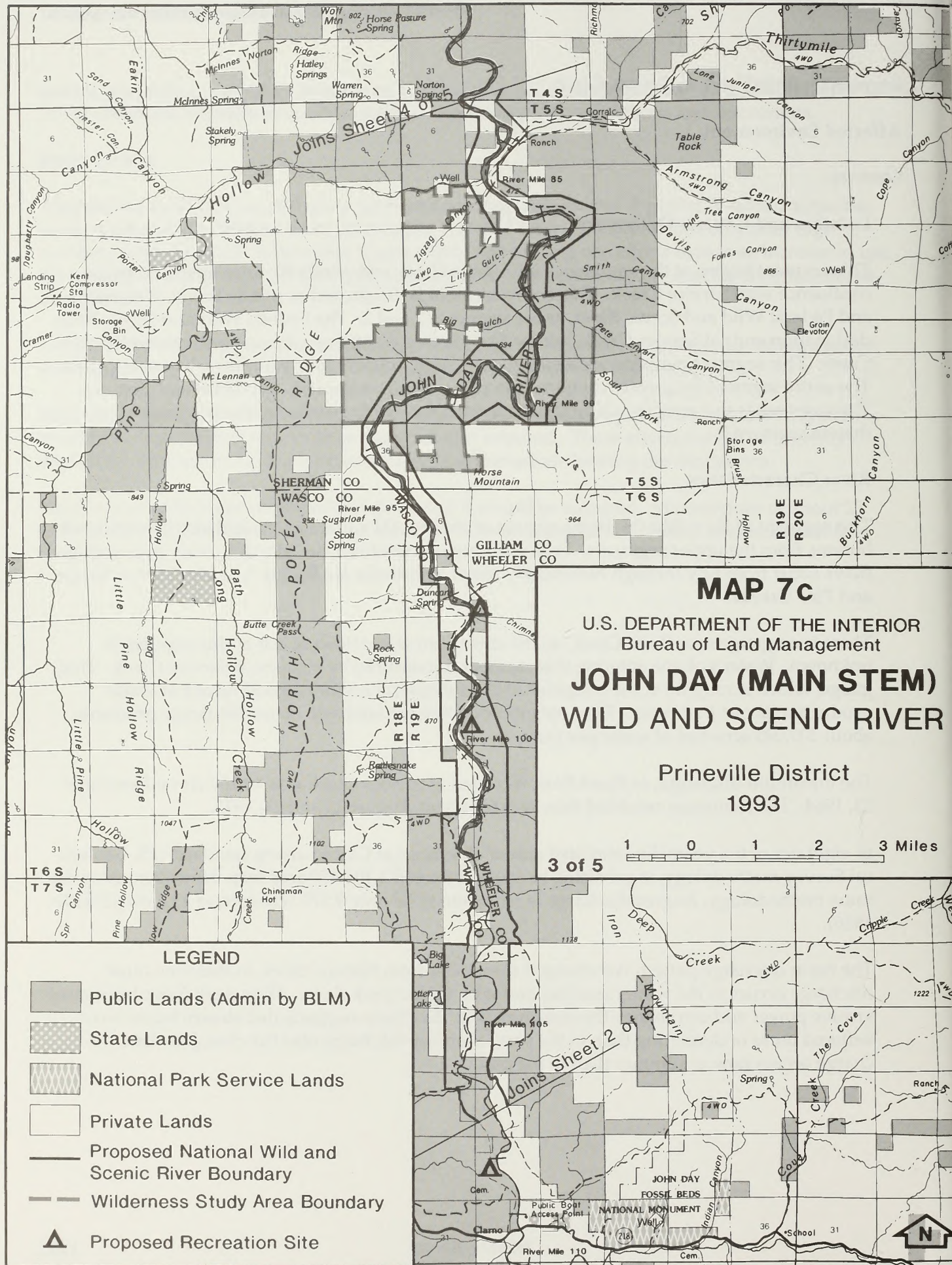
This segment of the subbasin drains an area of about 1,431 square miles, and also carries contributions from the upper segments. Peak discharge occurs from late March to early June and low flows occur from July through November. Major tributaries are Bridge, Muddy, Service, Rowe, and Pine Creeks.

There is no gauge near Butte Creek, so the amount of water flowing out of this segment is unknown. Water volume entering this segment is measured by a gauge at Service Creek. That gauge, which is roughly at the midpoint of the subbasin, provides a good record of water production above that point. Flow data indicate that the subbasin above the gauge produces about 200,000 acre-feet of water per year.

The maximum discharge, or flood flow, recorded at Service Creek was 40,200 cfs on December 23, 1964. The minimum recorded flow was 6.0 cfs on August 23 and 24, 1973.

In eight out of ten years the estimated annual discharge at Clarno, using standard U.S. Geological Survey methodology, is predicted to equal or exceed 1,106,450 acre-feet. However, using the same methodology, August discharge is estimated to be only 9,570 acre-feet, or 13.2 cfs (OWRD 1986).

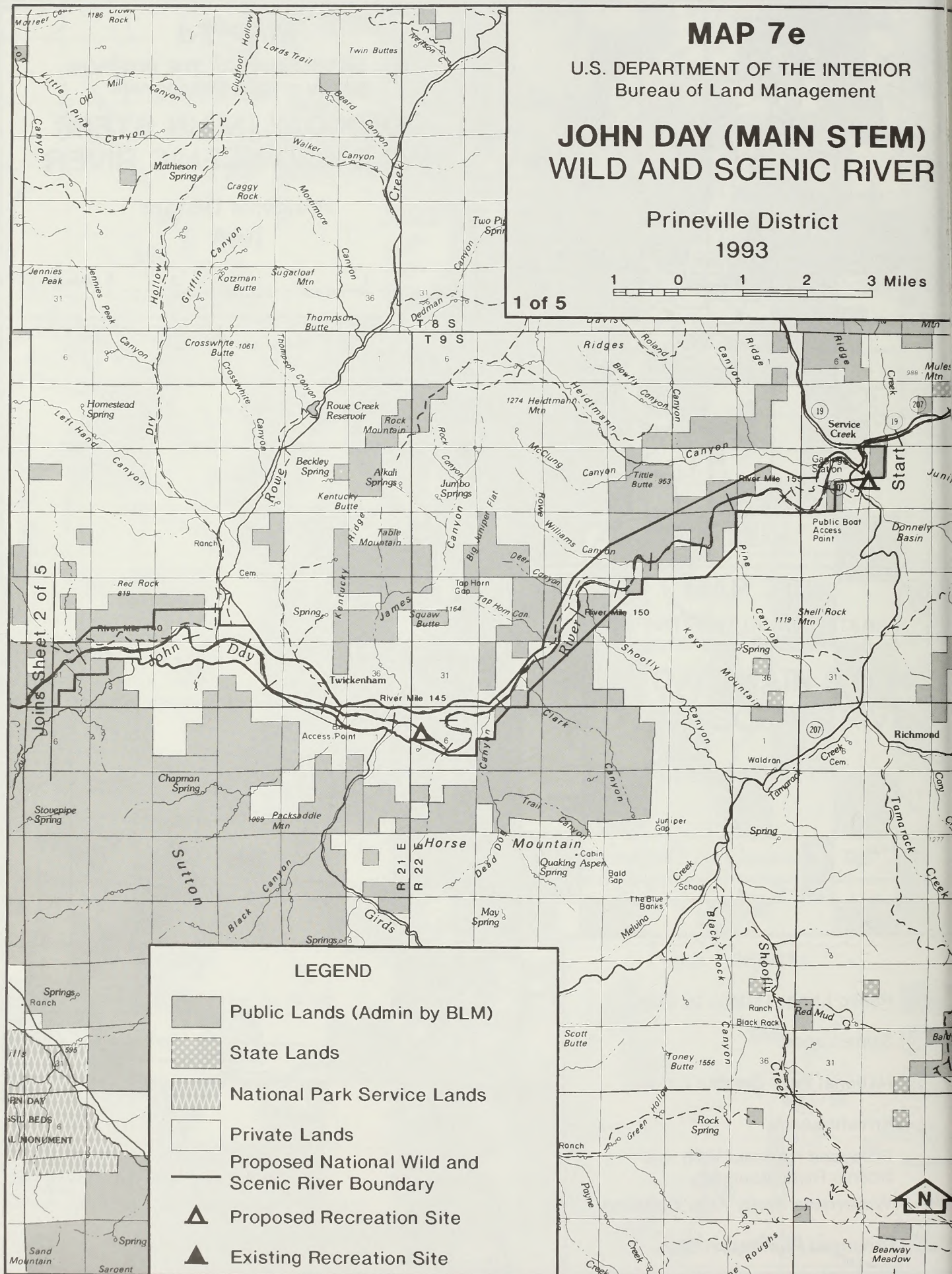
The basin discharge pattern has changed somewhat from historic times, in that now more discharge occurs in the winter months, and with higher peak flows. High peak flows have great erosive power and can change the stream profile. Evidence suggests that stream banks have suffered more undercutting than in the past. Summer discharge also has changed. Less discharge occurs now in summer than in the past.



Prineville District 1993



1 of 5



Water Quality in this segment is primarily the result of flow from the Upper John Day and South Fork John Day watersheds. Water quality generally exhibits satisfactory chemical, physical, and biological parameters except during water flow extremes (OWRD 1986). Turbidity, erosion, and sedimentation problems occur during high flows. Higher temperatures with concurrent lower dissolved oxygen occur during the low-flow periods.

Tributaries also exhibit high temperatures during the summer months. These tributaries carry high sediment loads during heavy rain storms. Portions of the basin contain soils of the fossil formations. When heavy rains occur, stream turbidity increases because these are very fine soils and they remain in suspension, giving the appearance of a serious sediment loading problem.

High temperatures create the most serious threat to beneficial uses of the water. Fecal bacteria in the main river occasionally threaten the safe use of the main river for water contact recreation. Bacteria are most prevalent after rain storms.

There are no permitted waste discharges to the streams of this segment. The town of Mitchell has no municipal sewage treatment facilities and relies on individual septic systems to dispose of domestic wastes.

Ground water quality is unknown for this subbasin due to lack of water quality information. The landfills at Mitchell (Bridge Creek drainage) and Rajneeshpuram (Currant Creek drainage) could cause future ground water problems.

Land Ownership and Classification

The BLM administers about half of the river frontage and most of the land near the river in this segment. BLM lands are scattered along the river, separated by private land tracts of various sizes. These private lands often are cultivated and irrigated, especially near Twickenham and Clarno.

The entire segment is designated as a Federal Wild and Scenic River. This segment also was designated as a State Scenic Waterway in 1970. The existing State Scenic Waterway classification for this segment is Scenic River Area.

The state guidelines under OAR 736-40-065 for how lands should be managed are as follows:

Within these areas, no new structures or improvements which are visible from the river, other than those erected or made in connection with agricultural uses, or those needed for public recreation or resource protection will be permitted. Additional dwellings, other than those necessary to existing agricultural uses, and commercial public service facilities, including resorts and motels, lodges and trailer parks which are visible from the river, will not be permitted.

Between RM 95 (about two river miles above Butte Creek's confluence with the John Day) and RM 130 (Cherry Creek) the river serves as a boundary for Sherman, Gilliam, Wasco, Jefferson and Wheeler Counties. Wheeler County has planning and zoning jurisdiction for all the lands

east of the river from RM 95 to RM 130 (Cherry Creek). From Service Creek to Cherry Creek, Wheeler County has planning and zoning jurisdiction along both the north and south sides of the river.

Wasco County has planning and zoning jurisdiction on the west side of the river between RM 95 upstream to Rodes Creek at RM 122. Jefferson County has planning and zoning jurisdiction on the west side of the river from Rhodes Creek at RM 122 upriver to Cherry Creek.

Wheeler County has planned for and zoned adjoining lands on the east side of the river between RM 95 and RM 130 for agricultural use. The zone designation is Exclusive Farm Use (EFU-160). The purpose of the Exclusive Farm Use zone is to provide areas for the continued practice of agriculture and permit only new uses which are compatible with agricultural activities. Lands in this zone may be subdivided when lots or parcels created are 160 acres or more in size. Wheeler County's Comprehensive Plan includes a policy that recognizes the existence of scenic waterway designation of the John Day along the lower river. The policy also states that the County will notify OPRD prior to the issuance of any land use or building permits proposed within a scenic waterway for compatibility review.

Wasco County has planned and zoned lands along the west side of the river for agricultural use. The zone designation is Agriculture-1 (80) A1-80. The purpose of this zone is to protect agricultural uses from encroachment by other, incompatible uses. The lot size minimum for this zone is 80 acres and there is no administrative mechanism for allowing a variance to this standard.

The Goal 5 section of the Wasco County Comprehensive Plan acknowledges the fact that the John Day River is a State Scenic Waterway. Because Wasco County has recognized the John Day Scenic Waterway as a Goal 5 resource, they have adopted a special overlay zone entitled the "Natural Areas Overlay". This overlay zone is designed to protect identified natural values along the river by allowing "only uses which will not permanently destroy the natural value." There is no written policy or ordinance procedure stating that Wasco County will coordinate with OPRD when land development is proposed in the scenic waterways, however, the planning staff does understand that coordination is needed.

Jefferson County has planned and zoned lands along the west side of the river for agricultural use. The zone designation is Exclusive Farm Use A-1 (EFU-A1). The purpose of this zone is to protect agricultural uses from encroachment by other incompatible uses. The lot size minimum for this zone is 80 acres and there is no administrative mechanism for allowing a variance to this standard. The Goals section of the Jefferson County Comprehensive Plan acknowledges the fact that the John Day River is a State Scenic Waterway. In May of 1993 the County passed an ordinance stating that it will develop a program to protect cultural and natural Goals resources in the scenic waterway corridor within six months of the completion of this plan. In the meantime the county will rely on the state scenic waterway program and existing standards for stream and rim setbacks (section 412) of the county's zoning ordinance to protect resources along the John Day River. Presently, Jefferson County Plan Policy (5-L-1) recognizes the need for state scenic waterway protection of the John Day River and Policy (5-L-2) states that the county will coordinate with OPRD staff when proposals for development are made along the John Day River.

Public River Access

State Highway 218 crosses the John Day River at Clarno. There is a State Wayside at Clarno where boaters can put in or take out. On the west side of the river a dirt road runs north from Highway 218 along the river for approximately 3 miles before it enters private lands. There is a private dirt road running north from Highway 218 along the east side of the river for approximately 10 miles. There is a county gravel road running south from Highway 218 on the east side of the river that parallels the river for approximately 5 miles, but private land is between the road and the river. The existing Juniper Island Road reaches this area, but its status as a Wheeler County road is being contended and BLM has no public access on this road.

Between Twickenham and Bridge Creek a county road parallels the river for about 10 miles, about two of which are close enough to provide two areas of primitive river access. From Bridge Creek to Clarno a county road follows the river for 3.5 miles and provides three primitive public boat access points before leaving the river at Cherry Creek. From Bridge Creek a dirt road provides access to Priest Hole.

From Service Creek to Twickenham (13 miles), there are no public access points, though a few private roads are visible from the river. At Twickenham a county road crosses the river but there is no public access to the river at this point. In the past, the landowner has allowed boats to be taken out or launched there, with no long stays. The future of this access point depends upon the desire of the landowner.

Resource Values

Wild and Scenic River Designation

Refer to the discussion on this subject in Segment 1, **Wild and Scenic River Designation**.

Scenery

The river flows through both rural and primitive settings in this segment. The river valley here is generally wider than in other segments.

Boaters view occasional fields along the river, separated by tracts of public land. Riparian vegetation is sparse, with high, steep, grassy hillsides forming the visual backdrop.

The river flows through the colorfully scenic "painted hills" near Twickenham. These hills are an extension of the formation found in the nearby Painted Hills Unit of the John Day Fossil Beds National Monument. They are composed of multi-colored layers of erosive rock with little or no vegetation.

Vegetation

Riparian vegetation in this segment is similar to segment 2, with the exception that there is an increase in potential for diversity due to frequent broadening of the floodplain. This broaden-

ing slows down the river flows, allowing increased vegetation establishment and stabilization. Sedge/grass communities still dominate this segment with shrubs far below potential, but willow stands are increasing in some areas, such as upstream from Butte Creek and Clarno. Approximately 28% of the river banks exhibit substantial bank damage with bare soils exposed and no riparian vegetation in place. This is particularly evident in the areas with extensive floodplains and deep soils. The potential for increased riparian cover in these areas, and on this segment in general, is good. Presently, riparian habitat conditions are rated low to fair.

Cryptantha rostellata is the only special status plant known to occur in this segment. *Rorippa columbiae* and *Thelypodium eucosmum* are suspected. Two plants of interest, *Pediocactus simpsonii* var. *robustior* and *Chaenactis nevii* also occur.

Fish

This segment is part of the middle mainstem subbasin which produces approximately four percent of the John Day Basin summer steelhead. As many as 800 adult summer steelhead return annually to spawn. The mainstem serves primarily as a migration corridor for anadromous runs to spawning and rearing habitat in the upper subbasins.

Populations of rainbow trout, smallmouth bass and channel catfish exist in the subbasin. Good spawning habitat conditions for steelhead and resident trout exist in Bridge, Service, and Cherry Creeks. However, production within these streams is limited due to high water temperature and low flows during the summer.

Habitat for fish production in the mainstem of the John Day River is limited. The river is generally wide and shallow. Flow and water temperatures are marginal for salmonid production. Poor riparian conditions and inadequate food and cover limit the number of fish during the summer when low flows are prevalent. However, streamflows between fall and spring are adequate to support migration to tributary spawning and rearing areas and to quality habitat in the upper subbasins.

Wildlife

Use of this segment by wildlife is similar to that in segment 2, with a few exceptions. Yearlong use by Canada geese increases along this segment due to increased forage availability from agricultural lands and the more open nature of the canyon. Yearlong use by osprey, valley quail, pheasants, Western kingbird, and porcupines also increases from here upriver. In addition, winter use by goshawks, robins, whistling swans and bald eagles increases in this segment.

Cultural

River segment 3 was partially inventoried for cultural resources by Polk (1976). A few sites were located during the examination of this segment. These consisted of rockshelters (one with pictographs), one pit house village site, several open lithic scatters and one 1930's-era cabin. Cressman (1937, 1950) recorded several pictograph sites and tested a rockshelter near RM 120. The results of the testing were inconclusive and provided little data. Work conducted in the

Pine Creek (Gannon 1968, 1970, 1972; Endzweig 1992) and Muddy Creek (U.S.D.I., BLM CR Report 86-05-03) areas near Clarno has revealed that occupation in the vicinity of the segment extends back as far as 7,000 years, with most occurring later than 2,500 years ago.

Ethnographically, this segment falls on or near the boundary between the Tenino group of Sahaptian language speakers and the Northern Paiute who are part of the Numic language group (Ray et al. 1938; Stewart 1939). It currently is within the ceded lands of the Confederated Tribes of the Warm Springs. Farmer et al. (1973) indicate that an aboriginal trail paralleled the river along this segment, joining with another trail near Clarno. No known Native American religious sites or traditional use areas exist within the corridor of this particular segment.

This segment contains some interesting historic sites related to transportation and settlement. In the 1860's the route of The Dalles Military Road passed along the west side of this segment between Cherry and Bridge Creeks. Clarno was established in the 1880's by Andrew Clarno who was a cattle rancher. A post office was erected at Clarno in 1894, although there is some evidence to suggest that an earlier one existed in the 1880's. The floodplain zone of this segment has been subjected to farming and ranching activities since this early era.

Paleontology

This segment is located near the Clarno Unit and the Painted Hills Unit of the John Day Fossil Beds National Monument. Fossil-bearing exposures occur within the river corridor throughout this segment. No formal inventories have yet been conducted within the corridor but several locations are known to contain or are considered highly likely to contain significant vertebrate and botanical specimens.

Recreation

Primary recreation opportunities in this segment include boating, fishing, dispersed camping, hiking, hunting, and wildlife viewing. There are 88 known undeveloped campsites along the river, approximately 44 of which are on public land.

Boating can occur on the entire river segment. Boats provide the only public access to much of the river, especially between Service Creek and Twickenham and from Cherry Creek to Clarno. Public vehicle access to the river is available between Twickenham and Cherry Creek, at Clarno State Wayside and for about 3 miles downriver from Clarno on the west bank, providing opportunities for vehicle-assisted outdoor recreation activities. Public boat launches occur in this segment at Clarno, Priest Hole (undeveloped) and Service Creek.

There are numerous Class I and II rapids between long calm stretches. Also, there are three Class III rapids (Russo, Homestead and Burnt Ranch) and one Class IV (Clarno). For boaters with limited experience, the Service Creek to Clarno stretch is popular.

Wilderness

Spring Basin Wilderness Study Area occurs in this segment south of Clarno. It contains 5,982 acres. (See Map 7d.)

*Resource Uses***Agriculture**

Agriculture is an important economic use of this segment. Hay is the primary crop grown in the cultivated fields along the river, which are irrigated with water drawn from the river.

This segment contains 20 grazing allotments which vary in size from as little as 301 acres to 20,410 acres of BLM administered land (Table 38). The ownership pattern tends to be scattered in this segment. This creates a "checker board" situation where land ownership alternates as one travels the length of Segment 3.

Table 38: Grazing Allotments in Segment 3

Allotment		Category¹	Allotted AUMs	BLM Acres	Use Period
#	Name				
2633	Amine Peak	I	70	1205	0301-0228
2512	Big Muddy	I	605	14890	0301-1218
2577	Byrds Point	I	94	1455	0416-1215
2584	Catherine Maurer	I	526	14683	0301-0228
2545	Cherry Creek	I	438	11095	0301-0228
2544	Circle S	I	9	518	0401-1231
2537	Dead Dog Canyon	I	42	690	1101-0228
2587	Corral Canyon	I	88	2301	0301-1215
2656	Dry Knob	C	7	275	0416-1115
2535	Hayfield	C	11	345	0520-1104
2614	Clarno Homestead	I	63	1693	0401-0214
2649	Rim	C	3	301	0415-0731
2536	Spring Basin	I	142	5219	0401-1231
2588	Spud	M	40	608	1001-0228
2623	Steiwer Ranches	I	230	4376	0301-0228
2533	Sutton Mountain	M	1020	20410	0401-1215
2624	Thomas M. Stephens	C	7	328	0315-1014
2630	Tripp	I	7	80	0915-1231
2570	Zack T. Keys	I	58	1607	0401-0127
2569	Zack T. Keys	I	71	2001	0401-0202
Total			3531	84080	

¹ For definitions see Appendix.

The authorized periods of use vary greatly from as little as three and a half months to 12 months with the average being 8.2 months (Table 38). Fifteen of the allotments have authorized use from early spring through early fall. All 19 allotments have livestock grazing along the river sometime during the spring and summer. Some fall and winter grazing does occur which creates a livestock control problem. When cows graze along the river during low flows, they can move up and downstream and across the river easily, thus using neighboring allotments and areas that may have already been used heavily in the spring. There are no grazing systems in use on these allotments, although the Sutton Mountain Allotment will have a management plan in place during 1993. Evaluations should be completed on all the allotments in this segment by 1994. The key objective of all the evaluations will be the same as those outlined in Segment 2 which is to improve riparian and fish habitats. As in the previous segments, range developments are few, although some fencing exists, mainly to separate allotments.

Recreation

Boating, hunting, and fishing are the primary recreation activities occurring in this segment.

Boating in this segment occurs between April and July when water levels are sufficient. Water levels normally drop below adequate boating levels in June or July.

Hunting occurs in the fall with deer and chukar hunting the most popular. Hunting in this segment is concentrated where vehicle access between Twickenham and Cherry Creek and near Clarno. Low flows do not normally allow for hunting access by boat during the fall and early winter months.

Wilderness

The Spring Basin WSA (5,982 acres) lies to the east of the river and southeast of Clarno Bridge in this segment. The BLM recommended to Congress that this WSA is suitable for designation as wilderness, but no further legislative action has occurred. Until the wilderness review process is complete, this area will be managed so as not to impair their suitability for protection as wilderness. Detailed information on the Spring Basin WSA is available from the BLM Central Oregon Resource Area office in Prineville. The management of WSAs is discussed in the BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review, November, 1987.

Proposed Wild and Scenic Boundaries

The proposed Wild and Scenic River boundaries for this segment are shown on Maps 7c, d and e.

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue the existing management situation. Boating use would continue to increase and no facilities would be provided. Boating use now includes both day trips and overnight trips involving several days.

Popular campsites would receive increasing use.

BLM would maintain river campsites including dispersed camping sites at Burnt Ranch Rapids and Priest Hole. BLM would complete construction of the Service Creek Recreation site as planned.

The May 1 to October 1 motorized boating closure would continue from Butte Creek to Clarno bridge. Year-round motorized boating would be allowed on the remainder of this segment.

NOTE: Some citizens of Wheeler County want to change the name of this recreation site to R.N. Donnelly River Access Park. Public comments on this name change are invited.

Management Actions

Public Access

No new public access would be provided.

Facilities

No new BLM facilities would be provided. Existing recreation sites would be maintained in their present condition at Burnt Ranch Rapids and Priest Hole. Facility improvements at Service Creek are already underway, based upon a previous plan for that site.

Information and Education

The brochure provided by BLM to boaters and fishermen would be updated. Basic visitor information, as described in Management Common to All Alternatives.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

The May 1 to October 1 OMB motorized boating closure would be continued from Butte Creek to Clarno Bridge. Year-round motorized boating would be allowed on the remaining portion of the river segment whenever flows exceeded 1000 cfs.

Development of Service Creek River Access Site would be continued.

A five acre recreation area would be developed at Priest Hole. Facilities would include campsites, boat launch, day use area, parking, toilets, trails for wildlife viewing, signs and bulletin boards. Initially, overnight campsites would be limited to ten but design would provide for expansion if and when demand warranted.

A 40 acre developed recreation area would be provided at Burnt Ranch Rapids. This facility would include overnight campsites, a day use area, toilets, signing and hiking trails. No boat launch facility would be provided.

A parking area and boat launch would be provided at the small 2 acre undeveloped recreation site immediately below Burnt Ranch Rapids.

Day use facilities and wildlife viewing areas requiring about 2 acres would be provided at Clarno Homestead on the west bank across the river from Clarno State Wayside. Toilets, tables and parking would be provided at Juniper Island and Butte Creek if public access to these sites is acquired. About 5 acres would be required at both of these locations for these facilities.

Information and Education

Bulletin boards containing public information and education material would be provided at Service Creek, Twickenham (if public access is acquired), Priest Hole, Burnt Ranch, Clarno Bridge (in cooperation with OPRD) Juniper Island and Butte Creek recreation sites.

Information on watchable wildlife and history would be provided at Clarno Homestead.

Alternative B: More Use and Development

Alternative Described

This alternative would accommodate the highest reasonable use loads for this segment. BLM would seek new public vehicle access on Juniper Island Road and Butte Creek Road. BLM would also seek to acquire a public river access site near Twickenham. This site would contain only toilets, parking, public information and boat launch.

Public recreation sites would be developed at Priest Hole, one site above Burnt Ranch Rapids, one site below Burnt Ranch Rapids (to allow boaters to avoid the rapids) and day use facilities at Clarno Homestead.

The number of overnight boaters would be limited by the maximum number of available campsites. Day use boaters would not be limited. The May 1 to October 1 motorized boating closure would continue from Butte Creek to Clarno bridge. Year-round motorized boating would be allowed on the remainder of the segment.

Management Actions

Public Access

Public vehicle access to all public lands along the east river bank between Clarno Bridge and Butte Creek would be pursued. A public easement on the Juniper Island Road or construction of a new road on adjacent public lands would be required to accomplish this action.

The BLM road to Priest Hole would be improved for about 2 miles.

A public boater access near the Twickenham Bridge would be acquired from a willing seller. Depending on the site, this would require about 2 acres of land and up to 1/4 mile of road.

Facility improvements would continue at Service Creek.

Public vehicle access would be acquired from a willing seller on Butte Creek Road to create a loop drive from Fossil down Butte Creek, then along Juniper Island Road to Clarno, and finally back to Fossil on Highway 218.

Facilities

A public boater access facility near Twickenham Bridge would be constructed if appropriate private land is acquired. This would be a minimum development facility for day use only to minimize the amount of land to be acquired and to minimize visitor conflicts with the local community. This facility would have a boat launch, toilets, bulletin boards, and parking space.

Boating Use Limits

The number of boaters would be limited by the maximum number of available campsites. Day use boating would not be limited.

Motorized Boating

The May 1 to October 1 OMB motorized boating closure from Butte Creek to Clarno Bridge would be continued.

Alternative C: Moderate Use and Development

Alternative Described

This alternative would accommodate slightly higher use than presently exists. BLM would seek new public vehicle access on Juniper Island Road or Butte Creek Road. A minimum facility recreation site would be provided just above Burnt Ranch Rapids. A boat launch and camping facilities would be provided at Priest Hole, and a boat launch with parking and day use facilities would be provided at Twickenham if a suitable site could be acquired from a willing seller.

The number of overnight boaters would be limited to where 75 percent of available campsites were occupied at night. BLM would gather use data for two years. Day use boaters would be

limited to 75 percent more than the day use level determined by that effort. Motorized boating would continue to be prohibited OMB from Butte Creek to Clarno Bridge from May 1 to October 1. BLM would seek to continue this closure for the entire segment.

Management Actions

Public Access

Public access on Juniper Island Road, for about fifteen miles, would be sought to provide a means for the public to access public lands on the east river bank below Clarno to Juniper Island.

A public boater access near Twickenham Bridge would be acquired from a willing seller.

Facilities

Toilets, tables and parking requiring about 5 acres would be provided at Juniper Island if public access could be acquired.

A recreation site would be provided above Burnt Ranch Rapids which would involve about 40 acres and include overnight camping, day use area, toilets, and signing, but no boat launch.

A boat launch and day use facilities would be provided at Priest Hole involving about 5 acres. Facilities would include toilets, tables, signing and traffic control barriers. Overnight camping would be allowed and located near the boat launch and day use area.

A boat launch, toilets and signing would be provided on about 2 acres near Twickenham if a suitable site could be acquired.

Information and Education

Information and education material, such as bulletin boards, would be provided at Service Creek, Twickenham (if access if acquired), Priest Hole, Burnt Ranch, Clarno Bridge (in cooperation with OPRD) and Juniper Island.

Boating Use Limits

The number of overnight boaters would be limited to where up to 75% of available campsites are occupied at night. BLM would gather boating use data for two years. Day use boating would be limited to 75% more than the day use level determined by the two year collection effort.

Motorized Boating

Motorized boating would continue to be prohibited by OMB from Butte Creek to Clarno bridge from May 1 to October 1. BLM would seek to extend this same closure for the entire segment.

Alternative D: Low Use and Development

Alternative Described

This alternative would seek to keep use at the presently low levels by limiting boating use and providing no additional river access or facilities.

Numbers of overnight boaters would be limited to where boaters occupy 50 percent of available campsites during peak periods and 20 percent during non-peak periods. BLM would gather boater use data for two years. Day use boaters would be limited to 50 percent more than the numbers determined in the two year effort during peak periods and 20 percent during non-peak periods.

BLM would seek to prohibit motorized boating in this segment.

Management Actions

Public Access

Same as Alternative A

Facilities

Same as Alternative A

Information and Education

Same as Alternative A

Boating Use Limits

The number of overnight boaters would be limited to where 50% of available campsites would be occupied at night during peak use periods, and 20% during non-peak periods.

Motorized Boating

BLM would seek to prohibit motorized boating on this entire segment.

Alternative E: Preferred Alternative

Alternative C is the agency preferred alternative.

Environmental Consequences

Air

Alternative A would cause increased dust at popular campsites due to unlimited boaters using these sites.

Alternative B would pursue acquisition of vehicle access to about 30 miles of road while Alternative C would pursue access to about 17 miles of road. This would increase public access which would cause increased temporary dust on these roads.

Alternative D would create the least amount of dust because public use of roads and popular campsites would be less than in other alternatives.

Water

Alternative A, which proposes no changes in access and facilities, would cause continued site specific sedimentation at heavily used recreation sites such as Burnt Ranch Rapids and Priest Hole where vehicle use is presently uncontrolled.

Slight temporary increases in sedimentation would occur on about 60 acres in Alternative B and about 50 acres in Alternative C where construction is proposed. In the long term, however, these construction efforts also would serve to stabilize significant erosion which now occurs, especially at Burnt Ranch Rapids recreation site.

Increased public use accommodated by Alternatives B and C and unlimited use proposed in Alternative A would slightly increase the amounts of soap, garbage, and other waste in the river.

Vegetation

Unlimited public use and continued unrestricted vehicle use resulting from Alternative A would result in continued deterioration of vegetation at heavily used recreation sites.

Unlimited boating use in Alternative A would cause a decline in riparian vegetation vigor at popular boating sites.

Alternatives B and C would allow boating use to grow to higher levels. In this case riparian vegetation would be reduced at proposed recreation sites and in other areas where recreation use is concentrated. Proposed traffic control would enhance riparian vegetation in some areas where unrestricted vehicle access now is causing vegetative damage.

Alternative D, which would allow the lowest public use level, would permit riparian vegetation vigor to improve slightly at popular riverside recreation sites.

Existing and proposed recreation use levels would not impact special status plants in this segment. *Cryptantha rostellata* is not found in areas which would be impacted by boater use. *Rorippa columbiae*, if present, would occur along the riparian area and could be impacted by increased visitor use. *Thelypodium eucosmum* and any others that may occur would most likely be found away from the river, on the steeper, more inaccessible hillsides away from the most likely areas of disturbance.

Fish

Unlimited boating and non-boating use at recreation sites proposed in Alternative A would greatly increase fishing pressure and therefore increase fish mortality in proportion to the amount of public use.

Improved access (about 30 miles in Alternative B and 17 miles in C) and facilities (about 60 acres in Alternative B and 50 acres in C) would increase fish mortality through increased public use. However, levels of use in these alternatives are not unlimited as in Alternative A, which would cause the greatest fishing pressure.

Alternative D would cause fish mortality to be slightly reduced if boating numbers were held to lower than present levels.

Wildlife

Alternative A, which proposes no change, would allow continued increasing public use in the upper portion of this segment which already is accessible by road. This would displace wildlife species which are intolerant to humans.

Increased public use of the riparian zone due to allowing additional use and access as proposed in Alternatives B and C would displace some wildlife species and reduce the habitat quality of the riparian vegetation at some sites. Adverse impacts to wildlife would concentrate where people concentrate, such as at or near proposed new or improved recreation sites on about 60 acres in Alternative B and 50 acres in Alternative C.

Alternative D, which proposes the lowest use levels, would cause the least impact to wildlife. There would be less disturbance and displacement of wildlife, especially to those species intolerant to human presence.

Scenery

Alternative A would continue the lack of vehicle control, with its negative visual impacts, especially at Burnt Ranch Rapids where the highly visible vehicle trails would continue to expand.

Allowing unlimited boating use as proposed in Alternative A would cause popular riverside recreation sites to become visually degraded with increased litter, soil compaction, and loss of vegetation.

Facilities proposed on about 60 acres in Alternative B and about 50 acres in Alternative C would be visible from the river. Proposed new or improved recreation sites also would cause more vehicles and people to be visible at these locations. Proposed traffic control would improve scenic quality in areas where unrestricted traffic is causing highly visible environmental damage.

Scenic values would be most preserved with Alternative D, in which the least amount of public use would be allowed by limiting boating.

Grazing

Available forage in the riparian zone would be slightly decreased with unlimited boating use proposed in Alternative A. Alternatives B and C would have no noticeable impact on grazing. This is because the increased use accommodated by these alternatives would not be sufficient to cause a noticeable reduction in riparian vegetation. Facilities proposed in Alternatives B and C for Priest Hole and Burnt Ranch Rapids would not affect grazing because these areas already are excluded from grazing.

Recreation Use

Unlimited boating use proposed by Alternative A would mean that the number of boaters would continue to increase based upon demand. Non-boating recreation use also would expand, especially in the area between Cherry Creek and Twickenham, where there is vehicle access to plentiful federal land.

Recreation use also would increase significantly with Alternative B. Facilities proposed for this segment would attract more visitors to the area. Boating use would continue to increase rapidly due to improved facilities. The proposed boat launch below Burnt Ranch Recreation Site would accelerate use because boaters would be able to avoid Burnt Ranch Rapids, which presently provides a barrier to inexperienced boaters. Other proposed boat launch sites would allow boaters to choose shorter floats.

Non-boating recreation use also would increase substantially with Alternative C due to the proposed new and improved facilities. Use of these new sites would primarily be camping and associated activities such as fishing and hiking. This river segment is far from major population centers so day use will be a small percentage of total use. Boating use also would increase but would be limited as described in this Alternative.

In Alternative D, non-boating recreation use would continue to expand rapidly between Cherry Creek and Twickenham. Boating use would be limited.

Recreation Experience

Boating experience would change rapidly and substantially in Alternative A which proposes no boating use limits. Boaters eventually would encounter numerous other boaters each day and unoccupied desirable campsites would become difficult to find.

The non-boating recreation experience also would change to a situation where numerous other visitors would be encountered each day. Popular recreation sites which are accessible by vehicle, such as Priest Hole and Burnt Ranch Rapids, would soon become severely degraded without traffic control.

The recreation experience, especially boating, would change substantially with Alternative B. A boat launch below Burnt Ranch Rapids would allow boating use to quickly increase far beyond present levels. Boaters using that river segment would encounter many more boaters who did not previously have the skill or equipment to safely negotiate Burnt Ranch Rapids.

Alternative C would cause the non-boating recreation experience in this segment to change from a primitive to a semi-primitive setting in several popular locations where facilities are proposed. More public use also would occur at popular recreation sites. Boating experiences would not change as much as in Alternatives A and B, even though more boaters would be encountered.

Alternative D would cause the boating experience to be enhanced for boaters who were successful in obtaining permits to float the river. Boaters who were unsuccessful in obtaining permission to float the river would be disappointed.

The non-boating recreation experience would change between Cherry Creek and Twickenham as substantially more people discover and use the area.

Guides and Outfitters

Guides and Outfitters would not be affected with Alternative A except that the experience provided to clients would change as described in Recreation Experience.

Alternatives B and C also would affect the recreation experience of clients. In these Alternatives use would increase to higher levels than at present. Some Guides and Outfitters probably would be excluded with Alternative D.

Social and Economic Conditions

The social setting in this segment would change substantially within a few years with Alternatives A, B and C, which all accommodate increased use, especially boating use. Residents of this segment would encounter many more boaters and more visitors in general. Much of this segment is accessible by vehicle but much of this access is not public. Increased public use could increase incidences of trespass.

Continued lack of a public boat launch facility near Twickenham proposed in Alternatives A and D would increase conflicts between boaters and private land owners at Twickenham.

Residents in the lower portion of this segment, where public access is limited, would encounter more boaters during non-peak periods.

Alternative D would allow the social setting between Cherry Creek and Twickenham to change as more non-boating public use occurred.

Increases in use from Alternatives A, B and C would enhance local businesses related to recreation, such as gas stations, shuttle services and restaurants. Towns that would be affected include Fossil, Mitchell and Service Creek.

Public Services

Increased public use in this segment would require more emergency services and law enforcement. These services could not be adequately provided by local communities which have limited capabilities. The greatest and most immediate needs would be felt with Alternative A.

Alternative B also would increase the need for emergency services and law enforcement. This Alternative would provide a boat launch below Burnt Ranch Rapids which would allow many beginning boaters access to remote country in the lower portions of this segment.

Alternative C would also require more emergency services, but not as many as Alternative B.

Imposing boating use limitations would require a costly permit system to be developed, implemented and enforced.

and the John Day River and extends to the Mainstem near Dayville. This area is designated a State Scenic

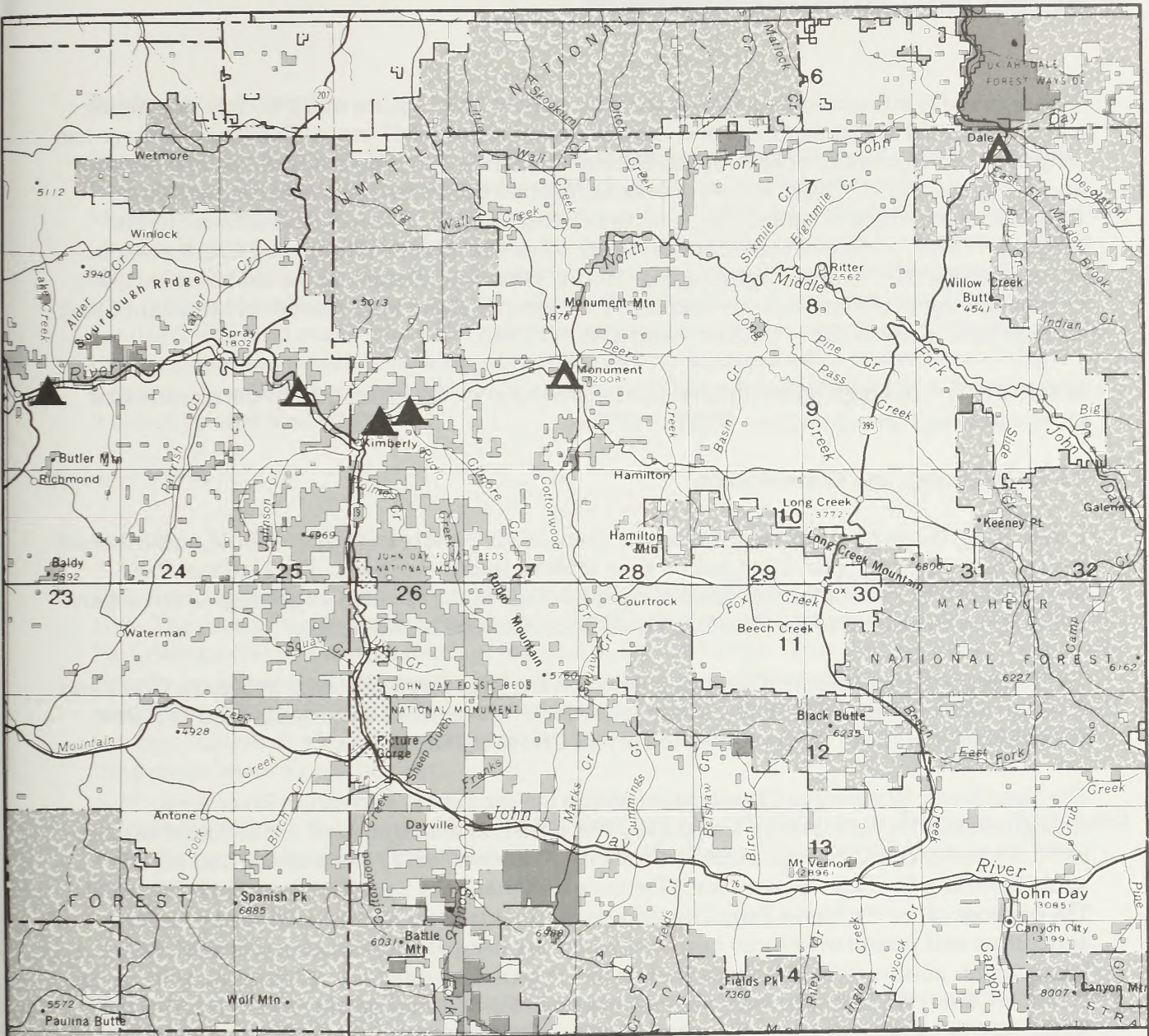
beside the river in this segment. The river generally flows from east to west and while public land tracts are not numerous here, the area is rural. The area is rural and hilly off the river, often covered with

ville and Kimberly. This portion of the National Monument, including highly developed campgrounds.








John Day occurs at Kimberly. From
er to sustain boating during the
is point rarely contains enough

in segment 3. The gauging station measures for the period of record range in discharge of 6.0 cfs with a mean annual discharge from March to June, with peak discharges affecting the Service Creek gauging station, Horseshoe Creek, and Parrish Creek.

charges from the North Fork, Middle and sedimentation occur during high occur during the low flow periods.



LEGEND

-  Public Lands (Admin. by BLM)
-  USFS Lands
-  National Park Service Lands
-  State Lands
-  Private Lands
-  Existing Recreation Site
-  Proposed Recreation Site

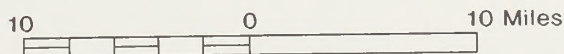
MAP 7f

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

JOHN DAY RIVER

Prineville District

1993



This segment is influenced by a watershed that is about 1,680 square miles in size. A gauging station is located at Picture Gorge and has a period of record of 61 years. Extreme discharge has ranged from a maximum of 8,170 cfs on December 22, 1964, to a minimum of 1.0 cfs in August and September, 1930. Over 76 percent of annual runoff occurs between February and June. Less than one percent of annual runoff occurs during August. Mean annual flow is 503 cfs. Mountain Creek, Holmes Creek, Branson Creek, Dick Creek, and Cottonwood Creek are tributaries affecting the Picture Gorge gauging station. However, streams in the subbasin are likely to stop flowing in the late summer and fall. For example, flows have ceased on Mountain Creek at some time in seven out of thirteen years (OWRD 1990).

Sedimentation and high water temperatures continue to be the water quality parameters that are threatening fish populations (OWRD 1990).

Land Ownership and Classification

Lands along the river in this segment are predominantly private but tracts of BLM-administered land occur frequently, providing public river access in many locations. The National Park Service administers about seven miles of river frontage in the Picture Gorge area, which is part of the Sheep Rock Unit of the John Day Fossil Beds National Monument.

The Federal Wild and Scenic River designation on the John Day River ends at Service Creek and does not include this segment. Twelve miles of this river segment were designated as a State Scenic Waterway (from Service Creek to Parrish Creek) in 1988.

The State Scenic Waterways Classification within the segment is Recreation River Area. The state guidelines for how private lands should be used and managed here can be found in Chapter V. From Service Creek upstream to Kimberly, Wheeler County has planned and zoned lands adjoining the river for farm use. The zone designation is Exclusive Farm Use (EFU-160). The purpose of the Exclusive Farm Use Zone is to provide areas for the continued practice of agriculture and permit only those new uses which are compatible with agricultural activities. Lands in this zone may be subdivided when lots or parcels created are 160 acres or more in size. Wheeler County's Comprehensive Plan includes a policy that recognizes the existence of the scenic waterway designation of the John Day along the lower river. The Wheeler County policy states that the county will notify OPRD prior to the issuance of any land use or building permits proposed within a scenic waterway for compatibility review.

From Kimberly upstream to John Day Fossil Bed National Monument the lands adjoining the river are planned and zoned for farm use by Grant County. The zone designation is Exclusive Farm Use (EFU-20). The lands adjoining the river from the National Monument upstream to Dayville also are planned and zoned by Grant County for farm use with a zone designation of Exclusive Farm Use (EFU-40). The purpose of the zone is to preserve the best farm land for agricultural use. This zone is applied to the prime-intensive agricultural lands for farm use consistent with existing and future need for agricultural products, open spaces and resource protection. A lot or parcel of 160 acres is considered a farm unit. A lot or parcel of less than 160 acres can be created as per the numerical value provided after the letters EFU (20) or (40) if approved through a conditional use process.

Public River Access

State Highway 19 follows the river throughout this segment and intersects numerous public land parcels. There are opportunities for public boat put-in and take-out at Service Creek, Muleshoe Campground 2 miles upstream, at a turnout 5 miles east of Spray and at Kimberly on Oregon Highway Division land at the confluence of the North Fork with the Mainstem. State Highway 19 follows the river from Kimberly to Picture Gorge where U.S. 26 intersects. This 20 mile section of highway crosses four small parcels of public land and 3 miles of National Park Service (NPS) land near Picture Gorge where access to the river is permitted. Over half of this river segment has private land along its banks. The remaining 5 miles of river from Picture Gorge to Dayville is bordered by U.S. 26, which goes through NPS land for about 1 mile before it enters private land upstream.

Resource Values

Scenery

This river segment is located in a setting of deep narrow valleys with varied colors and vegetation. The area is highly scenic with Picture Gorge being an outstanding example. The National Park Service (NPS) manages much of the land in Picture Gorge. This management places a high priority on preserving the scenic quality of the area while accommodating visitor use. The remainder of the river segment also contains high scenic values with frequent rural and pastoral settings. Livestock grazing is a common land use of the area and hay fields often are seen on the private lands along the river.

A highway follows the length of this stretch but is not always visible from the river. Homes and outbuildings can be seen occasionally, along with other farm-related developments such as fences and water pumps.

Vegetation

Riparian vegetation along this segment has more diversity than segment 3 because it contains more shrubs and trees. Siberian elm and ponderosa pine are found here with numerous clumps of willow and mockorange. While this increased riparian diversity creates short stretches of river that have good habitat quality, sedge and juncus species continue to dominate the riparian vegetation, leaving only a fair overall habitat condition. This condition is improving, however, as willows, clematis, reed canarygrass and other species continue to increase along this segment. One factor still limiting the improvement of this segment is a high degree of bank damage.

Upstream from Kimberly, the vegetation is similar to that between Service Creek and Kimberly, with the exception of increasing numbers and sizes of cottonwood stands and agricultural fields. This is particularly the case upriver from Picture Gorge.

Special status plants known from this segment include *Thelypodium eucosmum* and *Mimulus washingtonensis*. *Rorippa columbiae* is suspected. Another plant of interest is *Chaenactis nevii*.

Fish

This segment serves primarily as a migration corridor for Spring Chinook and summer steelhead. About 18 percent of the basin's Spring Chinook and 23 percent of summer steelhead are produced in subbasins upstream from this segment. This segment contributes to the production of summer steelhead, with about 4 percent of John Day Basin summer steelhead being produced in tributaries between Picture Gorge and Butte Creek. Resident populations of rainbow trout, smallmouth bass and channel catfish also exist. Habitat conditions limit fish production. The river is wide and shallow with flow and water quality parameters low for salmonid growth and survival. Good riparian conditions and instream structure are lacking, which limits food production, spawning success and rearing survival.

Wildlife

Wildlife use along this segment is quite similar to segment 3, with a slight increase in species diversity and numbers due to the increase in varieties of tree species found here.

Cultural

This segment includes relatively little public lands with a small percentage having been inventoried for cultural resources. One prehistoric site and a lithic scatter have been identified on BLM lands in this area. Several pictograph sites occur in Picture Gorge, but have been only partially recorded. These sites are on lands administered by the National Park Service. Based on landforms that occur in the area, additional lithic scatters and pit house villages could be present. However, past agricultural practices as well as erosional processes may have covered any surface evidence.

Prior to 1830, the area was occupied by Northern Paiute groups (Ray et al. 1938). It was only after this period, due to the introduction of the horse, firearms and disease, that the Umatilla and Cayuse were able to push south to the John Day River. The pictograph sites at Picture Gorge may be related to this transitional period. Today, this area is within the ceded lands of the Confederated Tribes of the Warm Springs and also within what the Confederated Tribes of the Umatilla consider traditional use areas. There are no known Native American religious sites or traditional use areas within this segment.

Historic use of this segment appears to have been principally related to farming and ranching. No historic settlements or travel routes have been recorded.

Paleontology

Segment 4 is the only segment to have received a BLM inventory for paleontological resources (Hanson and Allen n.d.). This segment passes through the National Park Service's Sheep Rock Unit between Kimberly and Picture Gorge. Several significant vertebrate fossil localities occur in this stretch of the river. Other significant vertebrate fossil localities also may occur further downstream in the segment between Spray and Kimberly. These areas have not been formally inventoried.

Recreation

This river segment has many outdoor recreation opportunities. The river below Parrish Creek falls within a State Scenic Waterway. Existing uses of driving for pleasure, fishing, wildlife viewing and camping are well established. Boating below Kimberly is feasible. Highway 19 provides an excellent scenic loop drive when coupled with Highway 207 and U.S. 26, and has been selected by ODOT for testing new informational signs for this purpose. Existing uses have great potential for expansion.

The public land along the river provides frequent legal accesses to the river from Highway 19. Many of these public tracts are not identified on the ground. Existing recreation sites, managed by NPS and BLM, are popular and well used. They are not yet crowded, except for Memorial Day weekend.

Some hiking occurs in the national monument but no public hiking trails exist in the remaining river segment. Viewing of vertebrate fossils is possible, but they are protected under the Antiquities Act and collection is not permitted.

This segment has not been inventoried for campsites. However, using maps and general knowledge of the area it is estimated that there are 36 undeveloped areas along the river that could be used for camping, 16 of which are on public land. Developed camping is available at Muleshoe Campground and boat launch sites are located at both Muleshoe and Service Creek.

The National Park Service is planning a new visitor center for this vicinity.

Wilderness

There are no WSAs or designated wilderness in this segment.

Resource Uses

Agriculture

Agriculture traditionally has been the principle industry of the residents of this river segment. Livestock grazing is predominant on both private and public lands.

There are five BLM-administered grazing allotments along this river segment (Table 39).

Cultivated fields are common on private lands along this segment. They are used primarily for growing hay and are irrigated by water from the John Day River.

Recreation

Driving for pleasure, fishing, wildlife viewing, and camping are the most popular recreational activities in this segment. Boating below Kimberly also is gaining in popularity. Visitors often are initially attracted to the Sheep Rock Unit of the John Day Fossil Beds National Monument.

Table 39: Grazing Allotments in Segment 4

	Allotment	Category	BLM Acres	BLM AUMs	Grazing Season
Service Creek to Dayville	Dave Stirewalt #2625	I	1,340	65	3/1-6/7
	Harper Mtn. #2626	I	1,000	33	3/16-11/15
	Horseshoe Cr. #2563	I	1,062	63	5/1-11/9
	Charles Hill #2554	I	2,557	120	4/1-11/30
	Andrew Leckie #2575	I	55	1	5/1-5/31

The John Day Fossil Beds National Monument reported 29,632 visitors in 1992 at their Sheep Rock Unit visitor center. The proposed NPS Thomas Condon Visitor Center is expected to attract more visitors. Once there, they often discover that the surrounding area has many other attractions.

Oregon State Highway 19 is adjacent to this entire river segment. Visitor use of this highway and associated public land has been low, but has exhibited rapid increases in recent years. This highway is one of the most popular pleasure driving routes in this part of the state and has been selected by ODOT for testing new informational signs for motorists.

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue existing use and development. Existing facilities would be maintained, no new access would be provided, and boating use would continue to increase.

Management Actions

Public Access

No new or improved public access would be provided.

Facilities

No new facilities would be provided. The improvements being made at Service Creek would be completed.

Information and Education

The minimum visitor information would be provided as described in Management Common to All Alternatives.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

No motorized boating restrictions would be imposed.

Alternative B: More Use and Development

Alternative Described

This alternative would accommodate the highest reasonable use levels for this segment. A boat launch and day use facilities would be provided at the recreation site at Mile Post (MP) 99 between Spray and Kimberly. Public information and education efforts would be expanded, including installation of signs at Muleshoe and MP 99 recreation sites.

Float boating and motorized boating use would not be limited.

Management Actions

Public Access

No new public access would be acquired. Existing public access would be improved and identified with improved signing. This would occur on very short distances of road in several locations, totalling about one mile.

Facilities

A boat launch, toilets, seven picnic sites, interpretive signing and overnight parking facilities would be provided on about 3 acres at the recreation site at MP 99 between Spray and Kimberly.

Information and Education

Informational and educational signs would be installed at Muleshoe and MP 99 recreation sites.

A public information and education plan would be developed and implemented for this segment. The development would include informational and educational signs at pullouts along the two highways.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

No motorized boating restrictions would be imposed.

Alternative C: Moderate Use and Development

Alternative Described

This alternative would not expand public access or facilities. Public information and education would be expanded but roadside signing would be limited to the recreation sites at Muleshoe

and MP 99. BLM would collect boating use information for two years. Boating use would then be limited to 75 percent more than the use level determined from the two year collection effort.

BLM would seek to prohibit motorized boating from April 1 to October 1.

Management Actions

Public Access

Same as Alternative B

Facilities

Same as Alternative B except that overnight parking at the MP 99 recreation site would not be provided.

Information and Education

Same as Alternative B except that interpretive signing would be primarily limited to Muleshoe and MP 99 recreation sites.

Boating Use Limits

BLM would collect boating use information for two years. Boating use would then be limited to 75 percent more than the use level determined from the two year collection effort.

Motorized Boating

BLM would seek to prohibit motorized boating in this segment from May 1 to October 1.

Alternative D: Low Use and Development

Alternative Described

BLM would not expand public access, facilities or public information. However, State Highways are located next to or near the river for this entire segment, making maintenance of low use levels unrealistic.

BLM would collect boating use information for two years. Boating use would then be limited to 50 percent more than the use level determined from the two year collection effort.

BLM would seek to prohibit motorized boating in this segment.

Management Actions

Public Access

Vehicle access would be closed at Bologna Creek.

Facilities

Same as Alternative B

Information and Education Same as Alternative A

Boating Use Limits

BLM would collect boating use information for two years. Boating use would then be limited to 50 percent more than the use level determined from the two year collection effort.

Motorized Boating

BLM would seek to prohibit motorized boating use of this segment.

Alternative E: Preferred Alternative

Alternative B is the agency preferred alternative.

Environmental Consequences

Vegetation

Riparian vegetation would be slightly affected by any of the Alternatives presented. The most impact would be with Alternative A, which would allow unlimited growth of boating use. In this case, vegetation vigor would decline significantly at popular recreation sites. This situation already occurs but its' impacts would be increased with unlimited boating use.

Reduced boating would not significantly improve riparian vegetation vigor at popular recreation sites accessible by vehicle because these sites are mostly used by non-boating recreationists.

Existing and proposed recreation use levels would not impact special status plants in this segment since *Thelypodium eucosmum* and *Mimulus washingtonensis* are both primarily found in steep drainages away from areas of high public use. However, historic records indicate *Thelypodium eucosmum* was once found along the John Day River and a contemporary sighting of *Thelypodium eucosmum* is recorded from along the river in this segment. This sighting, no doubt, was a plant whose seed originated from a more typical habitat in a side drainage and somehow managed to germinate and mature near the river's edge. It is unlikely such an establishment would persist and other land use practices would have a greater effect on such a population than recreational use. *Rorippa columbiae*, if present, would occur along the riparian area and could be impacted by increased visitor use. Any others that may occur would most likely be found away from the river, on the steeper, more inaccessible hillsides away from the most likely areas of disturbance.

Fish

Fish mortality and stress would increase slightly as boating use increases to levels described in Alternatives A and B. Increased boating would primarily occur between Kimberly and Service Creek because of the increased flow provided by the North Fork at Kimberly.

Fish mortality and stress would remain at about present levels with Alternative C, even though boating use would increase. This is due to the already high fishing pressure in this segment which is accessible by motor vehicle.

Reducing boating use as described in Alternative D would cause fishing pressure to increase at a slightly slower rate than presently is occurring. Fishing pressure would continue to increase due to increasing numbers of non-boating anglers.

Wildlife

Unlimited boating proposed in Alternative A would increase wildlife disturbance on private lands along the river. Wildlife on private lands have remained largely undisturbed due to the lack of public access.

Alternatives B and C also would increase wildlife disturbance on private lands, but to a lesser degree than Alternative A due to the use limits imposed.

Alternative D would have a slight benefit to wildlife due to reduced boater numbers. However, the benefit would be limited because this river segment lies next to a highway and has numerous vehicle access points.

Scenery

Unlimited boating and increases of other uses allowed to continue in Alternative A would result in increases of visible litter.

Interpretive and informational signing proposed in Alternative B could be visible from the river at Muleshoe and MP 99 recreation sites and at many highway turnouts.

Interpretive and informational signing proposed in Alternative C would be visible from the river at Muleshoe and MP 99 recreation sites.

Alternative D would result in slightly less litter at popular boating sites due to the limited number of boaters allowed by this alternative.

Recreation Use

Unlimited boating and increases in existing recreation use proposed by Alternative A would cause a substantial increase in overall use in the short-term. The new NPS Thomas Condon Visitor Center and improved highway signing in this segment will contribute to the rapid increase in use.

Alternatives B and C, which impose boating use limits and improved signing, would allow recreation use levels and activities to increase at present or slightly increased rates. The increase would be slight because the Alternatives propose only minor new facility development, totalling about 3 acres. Rates of use, however, already are showing a rapid increase, both for boating and non-boating.

Alternative D, which allows the fewest boaters, would allow recreation use levels to continue to increase at present rates except for boating. However, boating is not a significant portion of the present public use of this segment.

Recreation Experience

Unlimited boating and increases in other recreational uses described in Alternative A would cause a rapid increase in use numbers in this easily-accessible river segment. Most change will be noticeable on the river between Kimberly and Service Creek where more public facilities and public access probably would be provided by the private sector. This also is the portion of this river segment that accommodates boating due to the addition of North Fork waters at Kimberly.

Alternatives B and C would not be expected to change the recreation experiences significantly, except for fishing and boating. This river segment is narrow enough that all fishing holes can be reached from either bank, but large amounts of private land limit fishing in some areas. Continued increased boating in Alternatives A, B and C would create significant competition for fishing holes during high use periods.

Alternative D, which would limit boating use the most, would change the boating experience in that boaters would have to apply for and sometimes be denied permits. Boaters who were successful in obtaining a permit would experience less crowded boating conditions.

Non-boating public use of BLM tracts would continue to increase. But, non-boaters would see fewer boats with Alternative D than with other Alternatives.

Social and Economic Conditions

Communities in this river segment would experience continual increases in visitation and tourism regardless of the Alternative chosen. Business establishments serving tourists on the highway would experience increasing demand for tourist support services. Unlimited boating use proposed in Alternative A eventually would contribute significantly to the use increase. Unlimited boating also would increase the incidence of trespass on private lands along this river segment.

Accommodating the existing growth in public use and allowing a substantial increase in boating use as proposed in Alternative B, and with a moderate increase, as in Alternative C, would benefit the economy of Service Creek, Spray, Kimberly, and Dayville. However, some residents of the area may be dismayed at the continuous increase in numbers of people traveling through these once remote and quiet communities.

Even with Alternative D local communities would continue to experience a steady increase in the number of tourists. Local business also would continue to experience increased demand for tourist services but the rate of growth would be slightly less than in other alternatives due to the limitations on boating use proposed by this Alternative.

Public Services

Any alternative selected by this plan eventually would result in an increased need for emergency services and law enforcement which local communities are unable to provide. This would be due to the increased public use, especially boating use.

A limit on boating use proposed in Alternatives B, C and D would require an expensive boating permit system be established. Enforcement of boating use limits in this segment would be extremely difficult given the numerous places where boaters can enter and leave the river.

Alternative D would cause the need for public services to remain about the same as for other alternatives except as they relate to boating. The need for law enforcement and emergency services related to boating use would increase even though boating use would remain at present or slightly lower levels. This would be due to the anticipated difficulty in enforcing boating limitations in this segment.

Limiting boating as described in this alternative would require design, implementation, and enforcement of a permit system which would be extremely expensive. Administering the system would certainly be costly, but enforcement would be the major expense. This segment would be the most expensive to enforce because the close proximity of roads and highways to most of the river in this segment allows almost unlimited boating access. Assuring that all boaters have a permit would require numerous river rangers and law enforcement personnel.

Segment 5: Dayville to Headwaters

Affected Environment

Overview

Location and General Description

Segment 5 begins at the mouth of the South Fork and ends at the mainstem headwaters in the Malheur National Forest. Almost dividing Grant County in half, this 72-mile portion begins in the headwaters by paralleling a county road north to Prairie City and then flowing west near Highway 26 to the town of Dayville. It originates in the ponderosa pine-covered mountains and flows into the John Day Valley of grass and sagebrush, passing the towns of Prairie City, John Day, Mount Vernon, and Dayville. Livestock grazing and growing hay are the primary agricultural uses in this segment. (See map 7f, page 161)

Beginning at the headwaters, the USFS manages the first eight miles of this river segment. The lower section flows through private land, along the valley floor.

River Characteristics

This segment and its tributaries make up the Upper Mainstem Subbasin, draining an area of approximately 1,070 square miles. Subbasin elevations start above 9000 feet and drop to 2,230 feet and range from forest and range land in the Blue Mountains to lower benchlands and irrigated valleys. Major tributaries to this segment include Dixie Creek, Strawberry Creek, Canyon Creek, and Beech Creek. The South Fork, a separate subbasin, marks the boundary between segments 4 and 5.

The John Day River has been gauged in segment 4 at Picture Gorge, about 6 miles west of Dayville, since 1926. Annual average discharge at Picture Gorge is 346,600 acre-feet. Not including the South Fork, segment 5 and its tributaries contribute about 246,600 acre-feet annually. Peak discharge from the subbasin generally occurs between March and early June, while the lowest flows occur during August and September.

Aside from the late summer months when water temperatures are prone to be high, water quality tends to be good in the Upper Subbasin. Irrigation return flow is a major source of nutrient non-point source pollution. Cattle feedlots along the stream have been identified as point sources of pollution. Cattle grazing, road building, and timber harvesting have altered the watershed by compacting soils and reducing vegetative cover, increasing soil erosion potential, decreasing precipitation infiltration and storage, and increasing runoff. Management methods such as range improvements, vegetation manipulation, and riparian enhancement projects would improve watershed conditions. The most developed area in the basin consists of the upper John

Day River Valley from Dayville to Prairie City. There are no municipal sewage point source discharges to the streams of the subbasin although Mount Vernon does have a discharge permit.

Land Ownership and Classification

The headwaters of this segment flow for eight miles through the Malheur National Forest. The river then flows through mostly private lands. A few small tracts of BLM land are scattered among the private lands, but these tracts do not involve river frontage. ODFW manages two small tracts of river frontage in this segment. One is near Dayville and the other near Mt. Vernon. There are no state scenic waterways or federal Wild and Scenic designations on this segment. OPRD operates the 21-acre Clyde Holliday State Park, located on the river seven miles west of the town of John Day on US 26.

All of this river segment is located in Grant County. Grant County has planned and zoned lands adjoining the first eight miles of the river (from RM 284 to RM 276) for forest use, F-80 (160). From RM 276 (T 14 S., R 33_ E, south boundary of Section 13) to RM 246 (T 14 S, R 31 E, west boundary of Section 21) lands adjoining the river are planned and zoned for exclusive farm use (EFU-80). From RM 246 to Dayville the lands adjoining the river have been planned and zoned for exclusive farm use, EFU-40.

Lands zoned for forest use in this segment are designated Forest 80 (160). This zone is applied to the highest and best producing forest lands. Its purpose is to conserve and protect forest lands for commercial growing and harvesting of timber and to protect other forest uses such as watersheds, wildlife habitat, scenic and recreational values and livestock grazing. In an F-80 zone, the minimum lot size for new farm or forest parcels is 80 acres and the total number of homesites cannot exceed an overall density of 1 dwelling for every 160 acres.

Land zoned for farm use is designated either EFU-40 or EFU-80. The purpose of this zone is to preserve the best farm land for agricultural use. This zone is applied to the prime-intensive agricultural lands for farm use consistent with existing and future needs for agricultural prod-

ucts, open spaces and resource protection. A lot or parcel of 160 acres is considered a farm unit. A lot or parcel of less than 160 acres can be created as per the numerical value provided after the letters EFU (80) or (40) if approved through a conditional use process.

Public River Access

Public river access is limited in this segment due to the extensive private land surrounding the river. US 26, however, follows the river for 53 miles from Prairie City to Dayville. It intersects 1 mile of state land just east of Dayville and a small parcel of public land 8 miles east of Dayville. Clyde Holliday State Park (7 miles west of John Day on US 26) provides limited access to the river. A paved county road follows the river through private land for 10 miles southeast of Prairie City before entering about 4 miles of checkerboarded USFS and private lands. A paved USFS road (#14) then follows the river to near the headwaters. This road and the river are mostly bordered by USFS land for 14 miles but they do intersect a few parcels of private land.

Resource Values

Scenery

Most of this segment is in a rural setting. The river begins in the forested Blue Mountains but soon enters a wide, flat, agricultural valley bordered to the south and north by mountains. To the south, the peaks of the Strawberry and Aldrich Ranges make impressive backdrops, especially when snow-laden. The valley itself is mostly comprised of irrigated, green pasture-lands and livestock-grazed hills of grass and sagebrush. The river passes through four small towns, the city of John Day being the largest.

Vegetation

The original riparian vegetation of this segment has been largely replaced by pastures for livestock. The wide meadows along this segment are historic floodplains, presently used primarily for agriculture. These meadows now are prevented from receiving annual floodwaters by the dikes, and are flooded only during periods of unusually high flows. The result is reduced meadow building, with its associated riparian vegetation being replaced by meadow grasses or alfalfa hay. Some areas along the river, such as at Dayville and Prairie City, still retain large cottonwood and willow stands. However, due to dikes, the total acreage in these vegetation communities (cattail stands, horsetail, sedges and rushes) has been significantly reduced. The amount of riparian habitat still intact, however, does enable the segment to be rated in fair to good condition, with a moderate potential to improve.

No special status plants are known to exist along this segment. However, there is one historic herbarium record for *Thelypodium eucosmum*. *Rorippa columbiae* is suspected to occur in the area.

Fish

The most common anadromous fish found in this segment are summer steelhead, Spring Chinook salmon, and Pacific lamprey. Resident fish include bull trout, rainbow (redband) trout,

mountain white fish and westslope cutthroat trout in tributaries.

Mining, road building, logging, livestock grazing and other resource uses have contributed to stream sedimentation and turbidity, causing fish habitat degradation. Channelization of the river for agriculture and repair of the 1964 flood damage has reduced habitat diversity, causing the major reduction in fish habitat. Livestock grazing and road building also have contributed to a decrease in streamside shading, creating elevated summer stream temperatures that limit fish production, growth and distribution. The optimum water temperature for fish purposes in the John Day River is 55 degrees F with a maximum daily average temperature of 60 degrees F. However, water temperatures average 68 degrees F daily in normal years. Also, instream flows in August and September often are too low to support healthy fish populations.

For fish habitat to improve, emphasis must be placed on riparian vegetative recovery and watershed protection.

Wildlife

Wildlife diversity in this segment is somewhat improved over diversity in the lower river segments due to increased cottonwood stands and floodplain vegetation. Raptor use along this segment increases dramatically, due to the availability of perches and prey species such as Townsend's groundsquirrels and field mice. Redtail hawks are commonly found yearlong. Bald eagles, roughlegged hawks, goshawks, Coopers hawks, migrants such as pine grosbeaks, Oregon juncos, mountain bluebirds and robins are known to occur in the area.

It is significant that bald eagles, a threatened and endangered species, use this segment due to the presence of cottonwood stands for nocturnal roost sites. Several roost sites have been documented as consistently used, although it appears that use of particular trees may not be critical due to the availability of additional trees.

The agricultural lands and native range in this segment are used heavily by mule deer throughout the year. The most concentrated use occurs in winters with increased snow accumulation in the higher elevations.

Cultural

Due to the limited amount of public land along the mainstem in this segment, very little cultural resource inventory has been done. No prehistoric sites have been recorded. Based on the landforms present on public lands within the river corridor, few if any sites would be expected. On USFS managed lands in the subbasin, several sites have been documented north of Long Creek Ranger District and south of Bear Valley Ranger District. Prehistorically, the upper basin was a transition area between peoples of the Great Basin and the Columbia Plateau.

Prior to 1830, this area was occupied by Northern Paiute groups (Ray et al. 1938). It was only after this period, due to the introduction of the horse, firearms and disease, that the Umatilla and Cayuse were able to push south to the John Day River. Today, this area is partially within the ceded lands of the Confederated Tribes of the Warm Springs. It is also within what the

Confederated Tribes of the Umatilla and the Warm Springs consider a usual and accustomed joint use area. There are no known Native American religious sites or traditional use areas within this segment.

Gold mining is historically important to the Upper Basin as well. It was the discovery of gold in the 1860's that promoted settlement of the area, especially at Dayville and Prairie City.

Kam Wah Chung State Park is located in John Day. It is a museum preserving the site building and supplies of a nineteenth-century Chinese pharmacy.

Recreation

Little public recreation occurs on this segment due to the lack of public land. Private lands offer some recreation opportunities such as hunting, fishing, gold panning and swimming to the friends and family of the landowners. Some hunting and fishing also may occur in the upper reaches on the checkerboarded parcels of USFS land or within the state land parcel near Dayville. OPRD operates Clyde Holliday State Park, located on the river seven miles west of John Day on US 26. This park is a 21-acre park with 30 campsites with electric hookups, restrooms and showers, a hiker/biker primitive camping area, dump station and an 8-acre day use area with over a quarter mile of river frontage.

Wilderness

There are no wilderness study areas within this river segment. However, a number of small tributaries to the Mainstem John Day and Canyon Creek flow from the Strawberry Mountain Wilderness Area, which is southeast of John Day. This area, and three other WSAs adjacent to the Strawberry Mountain Wilderness Area, are managed by the USFS.

Management Situation and Land Uses

This plan does not propose alternatives or analyze impacts for this segment because BLM administers almost no land along the river. The present situation is described, however, to provide a more complete picture of the entire river system.

The private land along this segment is primarily used for livestock grazing and hay production. The few small scattered parcels of BLM land in this segment are not located on the river and also are used primarily for livestock grazing. There are no BLM grazing allotments on this segment. Lands in the uppermost portion of this segment in the national forest are predominantly used for livestock grazing, timber harvest and recreation.

Mining also is a common use in the upper portion of this segment. Placer mining occurs on Canyon Creek from the mouth upstream and there is potential for moderate-sized operations to mine the bench gravel. Most lode mines have ceased operation.

OPRD manages the previously-mentioned Clyde Holliday State Park and Kam Wah Chung State Park.

D. North Fork Segments

Segment 6: Kimberly to Monument

Affected Environment

Overview

Location and General Description

This segment begins at the confluence of the North Fork with the Mainstem of the John Day River at Kimberly (see map 6f). The segment proceeds upstream in a northeasterly direction for 16 miles to the community of Monument. The river valley in this segment is very wide with much of the bottomland in cultivated fields. State Highway 19 parallels the river here for 14 miles. (See map 7f, page 161)

Most of the land along the river in this segment is privately owned. There are several farms and ranches along the river and large fruit orchards near Kimberly. There are three BLM recreation sites on the few tracts of public land in this segment providing river access.

River Characteristics

Hydrology

The North Fork Subbasin encompasses an area of about 1,800 square miles in Morrow, Umatilla, and Grant Counties. The North Fork John Day River flows westward from the Blue Mountains for over 100 miles before entering the John Day River at Kimberly (Mainstem RM 184). Subbasin elevations range from about 1,900 feet near the mouth to over 8,000 feet in the Blue Mountains.

The North Fork is the most important subbasin in terms of water quality and flow contribution to the John Day River. It contributes over 60 percent of the average annual discharge of the John Day Basin. Major North Fork tributaries are Cottonwood, Fox, Big Wall, Potamus, Camas, Desolation and Granite Creeks, and the Middle Fork John Day River.

The North Fork has been gauged at Monument since 1925, and was gauged upstream near Dale from 1929 to 1958. Additional gauged tributaries include Camas, Fox and Desolation Creeks. Average annual discharge at Monument is 904,200 acre-feet. Peak discharge occurs between March and early June, and lowest flows generally are during July, August, and September. Records indicate flows have been below 10 cfs on North Fork tributaries, but only Fox Creek experiences periods of no flow.

National Forests are important watersheds. Forest canopy, soils, slope, elevation, and land use help to determine how much water is produced in the subbasin. Gauging stations located in the upper watershed provide a good indication of water yield from the surrounding National Forests. The average annual water yield for the subbasin above Monument is 359 acre-feet per

square mile. Average annual water yield is considerably greater in the upland forest areas than for the rest of the subbasin.

Water Quality

The North Fork Subbasin has the best chemical, physical, and biological water quality in the John Day Basin. Water quality problems occur in localized areas. Elevated water temperatures occur during low flows and erosion and sedimentation occur during high flows. The additional problem of toxic mine effluent leaching into Granite Creek is a localized problem. It is being addressed by ODFW, USFS, and BPA in a fish habitat restoration project.

Camas Creek, upstream from Ukiah, continually exhibits high nitrate levels regardless of the time of year. The source is unknown.

According to the DEQ, the Lower North Fork tributaries of Rudio, Fox, upper Big Wall, and Cottonwood Creeks have periodic water quality problems in various stream segments. The elevated temperatures, low dissolved oxygen, low flows, siltation, bank erosion, and debris accumulation in these streams can be partially attributed to grazing, channelization, logging practices, road construction, and irrigation withdrawals. Overall, the North Fork and its upper tributaries of Camas, Granite, and Clear Creeks have moderate problems. The remainder of the subbasin's streams are in good condition.

Land Ownership and Classification

Land along the river in this segment is predominantly private. The BLM administers a total of about 3 miles of river frontage in this 16 mile segment. The BLM-administered lands primarily occur near Kimberly where two BLM campgrounds are located.

There are no state Scenic Waterways or federal Wild and Scenic designations wild on this segment.

All of this river segment is located in Grant County and is planned and zoned for farm use. The zone designation is Exclusive Farm Use (EFU-20).

The purpose of this zone is to preserve the best farm land for agricultural use. This zone is applied to the prime-intensive agricultural lands for farm use consistent with existing and future needs for agricultural products, open space and resource protection. A lot or parcel of 160 acres is considered a farm unit. A lot can be created as per the numerical value provided after the letters EFU (20) if approved through a conditional use process.

Public River Access

Grant County Highway 402 closely follows this river segment for 14 miles from Kimberly to Monument. It intersects two parcels of BLM-administered land which contain Big Bend and Lone Pine campgrounds. Big Bend has a primitive boat launch. The balance of river frontage in

this segment is privately owned. A river access park is under construction at Monument. This park will provide public access for boating and fishing.

Resource Values

Scenery

This river segment has high scenic values. Many people discover this area while driving for pleasure on nearby Highway 19 which follows the mainstem of the John Day. This is a rural setting containing farm and ranch houses, barns, orchards and cultivated fields near the river. The river valley here is wide and the adjacent hillsides are covered with grasses, rock outcrops, and occasional juniper trees.

Vegetation

Riparian conditions along this segment vary widely. Some areas have good vegetation with extensive stream cover provided by an overstory of willow, alder, and water birch with an understory of grasses, sedges, and rushes. Other areas have poor conditions with no vegetation and rock and gravel shorelines. In some cases the rock and gravel condition is natural, but in other areas this condition is not natural, having been created by past land management practices. Additional plants common on this segment include clovers, cottonwood, bluegrass, clematis, cheatgrass, sagebrush, rose, and horsetail.

Special status plants known from this segment include *Thelypodium eucosmum* and *Mimulus washingtonensis*. *Rorippa columbiae* is suspected.

Fish

The North Fork Subbasin is the major producer of wild Spring Chinook and summer steelhead in the John Day Basin. Approximately 58 percent of the total basin Spring Chinook population and 43 percent of the total summer steelhead population are produced in this drainage. In recent years, as many as 1,855 adult Spring Chinook and 8,000 adult summer steelhead have returned annually to the subbasin to spawn. In addition, the Lower North Fork is the migratory route for runs traveling to and from the Middle Fork Subbasin. The North Fork drainage also supports resident fish populations. Smallmouth bass and channel catfish reside in the North Fork below RM 22.6 and resident trout are found throughout the subbasin.

Steelhead, resident trout and smallmouth bass populations provide a substantial recreational fishery for anglers. Annually about 10,000 recreation days are spent fishing for steelhead on the North Fork. Trout and bass fishing generate another 2,500 to 5,000 angler recreation days each year.

Streams in the Middle and Upper North Fork drainage generally have good channel structure, riparian and instream cover and water quality and quantity. Consequently, the subbasin

contains approximately 72 miles of Spring Chinook spawning and rearing habitat and 700 miles of steelhead habitat. Spring Chinook habitat lies between Camas and Baldy Creeks on the North Fork and in the Granite Creek system. Granite Creek usually produces more Spring Chinook per mile than any other area in the John Day Basin. Located in the North Fork headwaters, this system, which includes Clear and Bull Run Creeks, produces 20 percent of the total John Day Spring Chinook population. Major steelhead-producing streams in the North Fork Subbasin are Cottonwood, Rudio, Deer, Wall, Potamus, Desolation, Granite, Ditch, Mallory, Trout, Meadow Brook, Trail, Olive, Clear, Bull Run, Camas, Beaver, and Big Creeks.

Recently, Spring Chinook and steelhead production has decreased in the North Fork Subbasin. Increased logging, road building and poaching activities in the forested uplands probably have contributed to the declining populations. Between 1969 and 1973, biologists counted an annual average of 32 Spring Chinook redds (spawning beds) per mile in the system. Counts for the five years, 1981 to 1985, show spawning density decreased to an average level of 10 redds per mile. Summer steelhead production also has declined slightly. Declines in Spring Chinook production are partially attributable to dam mortality on the Columbia River. The degradation of spawning and rearing habitat also has had a major impact. High summer water temperatures limit juvenile Spring Chinook distribution and survival.

Wildlife

Wildlife diversity in this segment is quite high, due to the good vegetative condition. As with the lower segment on the mainstem, species mix changes seasonally, with some species such as mule deer and beaver found yearlong. Additional species observed on this segment include cedar waxwing, garter snakes, flickers, killdeer, robins, Western kingbird, Hungarian partridge, bald and golden eagles, prairie falcons, mink, raccoons, Pacific tree frogs, spotted sandpipers, and kingfishers.

Cultural

This segment has a very small amount of public land within the river corridor. Several small cultural resources inventories have been conducted within this segment, but no sites were found. Given the landforms occurring on public lands within the river corridor, expectations are low for discovering significant prehistoric cultural resources.

Prior to 1830, this segment was occupied by Northern Paiute groups (Ray et al. 1938). It was only after this period that the more northern Sahaptian-speaking groups (specifically the Umatilla and Cayuse) were able to push south to the John Day River. Today, this area is within the ceded lands of the Confederated Tribes of the Warm Springs and also within what the Confederated Tribes of the Umatilla consider traditional use areas. There are no known Native American religious sites or traditional use areas within this segment.

Historic use of this segment appears to have been principally related to farming and ranching. No historic settlements or travel routes are recorded for this segment.

Recreation

Public recreation opportunities on this segment are limited to the few tracts of BLM-administered lands on the river. These public lands, accessible by a paved highway, provide important river-related recreation opportunities such as boating, fishing, camping, wildlife viewing, swimming and picnicking. BLM manages two developed campgrounds (Lone Pine and Big Bend) and one river access site which is being developed at Monument. Big Bend campground has a developed boat launch. Opportunities for expansion of these facilities are limited due to limited public land on the river. The communities of Kimberly and Monument provide basic visitor services such as phones, food, and gas.

Wilderness

There are no WSAs or designated wilderness in this segment.

Resource Uses

Agriculture

Livestock grazing and growing hay in fields along the river are the principal economic uses of this river segment. Lands just off the river, both public and private, are used for livestock grazing during the spring and summer. Livestock, primarily cattle, are fed in concentrated feed lot operations during the winter. These operations occur along the river where cattle are fed the hay grown in the area during the summer. There are no BLM grazing allotments on this segment.

Recreation

This river segment has received relatively low public recreation use in the past, but that situation is changing rapidly. Primary recreational activities include driving for pleasure, fishing, and camping. The campgrounds in the area receive the most use during the fall hunting season when hunters use them as base camps while using other public lands in the area. Boating in this segment occurs primarily during the early spring steelhead fishing season. Boater numbers have been generally low due to limited access and the short duration of adequate water levels.

Commercial outfitters have rarely floated the North Fork. Only two commercial trips there have been reported by outfitters between 1988 and 1992. These were three day trips in May and one was primarily a fishing trip.

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue existing management. Existing facilities would be maintained, no new access would be provided and boating use would continue to increase.

Management Actions

Public Access

No new public access would be provided.

Facilities

No new facilities would be provided. Existing recreation sites would be maintained in their present condition. Development of the recreation site at Monument would continue.

Information and Education

Minimum visitor information and education would be provided as described in Management Common to All Alternatives.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

No motorized boating restrictions would be imposed.

Alternative B: More Use and Development

Alternative Described

This alternative would accommodate the highest reasonable use of the river and associated BLM-administered lands. The two existing recreation sites would be improved and expanded. Public information and interpretation would also be greatly expanded.

Boating use, including motorized boating, would not be limited.

Management Alternatives

Public Access

No additional public access would be acquired.

Facilities

Big Bend and Lone Pine recreation sites would be improved and expanded. Improvements would primarily be placing oil or gravel on campground roads and providing traffic control barriers at both sites.

A surfaced parking area near the boat launch would be constructed at Big Bend recreation site.

Four to six additional campsites would be added to Lone Pine recreation site.

Information and Education

An information and education plan would be developed for this river segment. The plan would include providing interpretive facilities at Monument, Big Bend, and Lone Pine recreation sites and at selected highway pull outs in cooperation with the Grant County Highway Department.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

No motorized boating restrictions would be imposed.

Alternative C: Moderate Use and Development

Alternative Described

Two recreation sites would be improved and expanded. Public information and interpretation signs would be placed at three recreation sites.

BLM would collect boating use data for two years. Boating use would then be limited to 75 percent more than the use level determined by the two year collection effort.

BLM would seek to prohibit motorized boating from April 1 to October 1.

Management Alternatives

Public Access

Same as Alternative B

Facilities

Same as Alternative B, except to eliminate addition of 4-6 campsites to Lone Pine recreation site.

Information and Education

Visitor information, interpretive signing, and interpretive trails would be provided at Monument, Big Bend, and Lone Pine recreation sites.

Boating Use Limits

BLM would collect boating use information for two years. Boating use would then be limited to 75 percent more than the use level determined by the two year collection effort.

Motorized Boating

BLM would seek to prohibit motorized boating from May 1 to October 1.

Alternative D: Low Use and Development

Alternative Described

Existing facilities would be maintained but not expanded. Public information signs would be provided.

BLM would collect boating use data for two years. Boating use would then be limited to 50 percent more than the use level determined from the two year collection effort.

BLM would seek to prohibit motorized boating.

Management Alternatives

Public Access

Same as Alternative B

Facilities

Same as Alternative C

Information and Education

Minimum public information and education would be provided as described in Management Common to All Alternatives.

Boating Use Limits

BLM would collect boating use information for two years. Boating use would then be limited to 50 percent more than the use level determined from the two year collection effort.

Motorized Boating

BLM will seek to prohibit motorized boating in this segment.

Alternative E: Preferred Alternative

Alternative B is the preferred alternative, except that no limit on numbers of boaters would be imposed. BLM would seek to prohibit motorized boating.

Environmental Consequences

Vegetation

About ten acres of improvements proposed in Alternatives B, C and D at Lone Pine and Big Bend Recreation Sites, especially traffic control, would protect and improve riparian habitat.

Alternative A would allow continued destruction of riparian vegetation at Lone Pine and Big Bend due to lack of vehicle control.

Improvements proposed in Alternative B at Lone Pine and Big Bend Recreation sites would increase visitor use. Side canyons near these sites where *Thelypodium eucosmum* and *Mimulus washingtonensis* are found could be impacted should visitors choose to hike as a part of their recreational activities. Normal recreational use under all alternatives is not expected to impact these species. *Rorippa columbiae*, if present, would occur along the riparian area and could be impacted by increased visitor use. Any others that may occur would most likely be found away from the river, on the steeper, more inaccessible hillsides away from the most likely areas of disturbance.

Fish

Fish mortality is directly related to the amount of people fishing in this segment. The most mortality would occur with Alternative A. This is because the proposed unlimited boating would allow significantly more people to reach all fishing holes by boat. Many fishing holes presently receive little use because they are accessible only by crossing private land.

Increased fish mortality also would occur with Alternatives B and C, but to a lesser degree than with Alternative A.

Alternative D would cause the least fish mortality because it proposes the most limitation on boating use. Less boating use would cause less fishing pressure and therefore less fish mortality.

Wildlife

Allowing boating to substantially increase as proposed in Alternatives A, B and C could displace some wildlife species which have previously used this riparian zone with few encounters with boaters.

Wildlife would be the least impacted by Alternative D, which provides the most protection for wildlife.

Recreation Use

No limitations on boating use, as proposed in Alternative A, would allow boating to increase to very high levels in a short time. This situation would rapidly increase overall recreation use as the area is discovered. No expansion of existing facilities in Alternative A would strain existing capabilities and require increased facility maintenance and additional vehicle management problems.

Alternatives B and C, which would provide for improving about 10 acres of existing recreation sites and allowing boating use to substantially increase, would cause increased public use of this river segment. Public use is low now but increasing rapidly as more visitors using the nearby National Park facilities discover the North Fork of John Day River. Improved facilities and signing would cause this increase in use to accelerate.

Recreation use levels would continue to increase in Alternative D. This is due to the non-boating recreation use which will continue to increase. Numerous recreation sites and river accesses reachable by highways and roads make controlling boating use numbers extremely expensive in this segment.

Should use levels reach their upper limits in Alternatives B, C or D, the resulting permit system would exclude some boaters. This would happen more quickly in Alternative D.

Recreation Experience

The recreation experiences would not substantially change in Alternative A, except for boating. Present low boating use soon would change to a situation where boaters frequently would encounter other boaters.

Allowing boating use to substantially increase in Alternatives B and C would cause a change in the boating experience. With the present low boating use boaters encounter one another infrequently. The expected rapid increase in boating use would increase the number of these encounters in a short period of time.

Alternative D would cause the recreation experience to remain more stable. Reduced boating would enhance the experience for most boaters who are successful in obtaining permits. Most boaters in this segment, however, will consider the overall experience degraded by having to obtain a permit and occasionally being unsuccessful.

Social and Economic Conditions

Projected increases in public use will occur regardless of Alternative and will have the most effect on Monument and Kimberly. They are the only communities where tourist services are available in this segment. The Kimberly store would certainly experience increased demand for their products but the store is situated on Highway 19 which already receives sustained and increasing tourist traffic. Monument is located at the upper end of this segment and does not receive a direct influence from the use of Highway 19. Increased use in this segment would be noticed in increased demand for tourist services in Monument.

Public use of this segment would continue to increase even though boating use would be limited by Alternative D.

Public Services

Greatly increased use would cause an increased need for emergency services and law enforcement which local communities are unable to provide. Monument has an ambulance but the nearest full time law enforcement agency is based in the city of John Day.

Demand for emergency services would increase most quickly with Alternative A, where no boating limitations would occur and no improved facilities would be provided.

Reduced boating, as proposed in Alternatives B, C and D, would require development and administration of a costly boating permit system. Enforcing a permit system in this segment also would be expensive and difficult given the numerous river access points where boaters could easily avoid law enforcement personnel.

Segment 7: Monument to Dale

Affected Environment

Overview

Location and General Description

This very remote river segment stretches 44 miles between the community of Monument and the Umatilla National Forest Boundary near the community of Dale. There is a primitive road adjacent to most of this segment, but it occasionally is impassable in inclement weather and often passable only by four-wheel-drive vehicle. The river flows through some of the finest scenery in Oregon, with abundant wildlife and interesting white water. The river valley is bordered by steep rugged hills covered with parklike stands of ponderosa pine, grass-covered clearings and rock outcrops. The riparian zone and side canyons are forested with ponderosa pine and Douglas fir trees. (See map 7f, page 161)

There are a few dwellings and commercial structures near the communities of Monument and Dale with a few ranches in the mid portion of the segment.

River Characteristics

See River Characteristics in Chapter 6 for the discussion of river characteristics for the entire North Fork of the John Day River.

Land Ownership and Classification

There are 44 river miles in this segment. The lands along approximately 29 river miles (66%) are privately owned; approximately 14 miles (32%) are administered by BLM, and only about one mile (2%) is administered by the State of Oregon.

Most of this segment is designated as a State Scenic Waterway. This designation begins at RM 20.2, which is about 3.5 miles upstream from Monument, and continues upstream to the boundary of the North Fork John Day Wilderness (RM 76) in the Umatilla National Forest. The State Scenic Waterway classification for this segment is proposed as Accessible Natural River Area. The state guidelines for how private lands should be managed in this segment can be found in Chapter V.

The uppermost five miles of this segment near Dale is included in a National Wild and Scenic River designation administered by the Secretary of Agriculture through the Umatilla National

Forest. (See the segment 8 discussion) Four of these five miles are designated as the Ukiah-Dale State Wayside managed by OPRD. The uppermost one mile of this segment, which abuts the National Forest Boundary, is administered by BLM.

From RM 20.2 to approximately RM 40, the lands adjoining the river are planned and zoned by Grant County for use as rangeland. The zone designation is "Multiple Use Range" (MUR-40 (160)) and it is applied to agricultural and non-productive forest lands, managed primarily for range and grazing use. In this zone a lot or parcel of 160 acres or more is considered a farm unit. A lot or parcel of less than 160 acres, but not less than 40 acres, can be approved as a farm unit through a conditional use process. The total number of dwellings allowed in the zone are not to exceed an overall density of one unit for every 160 acres.

Upstream from RM 40 the river meanders north and south between Grant and Umatilla Counties. In Grant County (above RM 40) the lands adjoining the river are planned and zoned for forest management. The zone designation between RM 40 and RM 51 is Forest 80 (160). This zone is applied to the highest and best-producing forest lands. Its purpose is to conserve and protect forest lands for commercial growing and harvesting of timber and to protect other forest uses such as watersheds, wildlife habitat, scenic and recreational values and livestock grazing. In an F-80 zone, the minimum lot size for new farm or forest parcels is 80 acres and the total number of principal and secondary homesites cannot exceed an overall density of one dwelling for every 160 acres.

The remaining upstream segment of the river (above RM 51) is adjoined by lands planned and zoned by Umatilla County for grazing, farm use and big game winter range. There are two zones that affect the use of these lands. The primary zone designation is Grazing/Farm (GF) and the overlay zone designation is Critical Winter Range overlay zone (CWR). The purpose of the GF zone is to protect grazing lands and other uses such as agricultural cultivation, watersheds, wildlife habitat and scenic values. In a GF zone the minimum lot size is 160 acres and parcels less than 160 acres may be allowed through a conditional use process. The density of dwellings allowed in this zone cannot be more than one dwelling for every 160 acres.

The purpose of the overlying Critical Winter Range zone is to conserve and protect important elk and deer winter range. The dwelling unit density is limited to a maximum of three dwellings within a radius of one-half mile of any proposed dwelling. All requests for dwellings or land divisions that will result in eventual placement of a dwelling are referred to the ODFW for review and recommendation.

Public River Access

There are 6 miles of county paved and gravel road from Monument to Wall Creek. This road passes through 1.5 miles of BLM-administered land providing river access. A privately-owned dirt road crosses private land for 8.5 miles and several tracts (11.5 miles) of BLM land from Wall Creek to Potamus Creek. This is a limited season road due to wet weather conditions and not a public access route. ODFW has acquired a public access easement along a graveled road which follows the river closely from Potamus Creek to Camas Creek (17 miles) and provides easy

access to the river where public land is adjacent. From Camas Creek to Dale the North Fork follows U.S. 395 for 3 miles through private land, then follows an all-weather road for one mile, crossing BLM land to the forest boundary.

Resource Values

Scenery

This segment contains diverse scenic values that include a wide variety of vegetation, color and interesting land forms. It is noted for its extremely steep hillsides covered with a mosaic of ponderosa pine groves, grassy meadows, wildflowers, rock outcrops and abundant wildlife.

The mid portion of this segment between RM 25 and RM 50 is a primitive setting with only a few man-made structures and primitive roads. Rural settings, with farms, fields, and livestock occur near the communities of Monument and Dale. Timber harvesting is occurring in the upper segment where a gravelled county road facilitates log-hauling. The primitive road which follows this segment is frequently visible from the water but does not generally attract attention unless it is being used by a vehicle.

There are two distinct landforms that dominate the landscape within this segment. From Monument to Potamus Creek (RM 40) the river (elevation 2,100 feet) flows through a wide valley with mountain peaks between 3,000 and 3,800 feet in height close by. This area is mostly rangeland with steep hillsides containing stands of ponderosa pine. Upstream from Potamus Creek towards Dale, the river corridor narrows and the hills rise to as much as 4,400 feet. Ponderosa pine stands here are more dense than those at lower elevations, especially on the north-facing slopes.

Vegetation

Riparian vegetation on this segment is dominated by grass/sedge/rush communities, generally in poor condition due to livestock grazing. Shrub communities, primarily willow, alder, and water birch, are clumped and generally are back from the water's edge. A significant portion of this segment is dominated by rock and gravel. The overall poor condition of this segment is continuing due to grazing impacts. On some segments reduced utilization of young shrubs is allowing vegetation to become established and the trend is improving. On much of the segment ponderosa pine is present and offers some canopy cover, although without the presence of the shrub canopy the effectiveness of the pine canopy is limited. Additional plants common on this segment include clovers, horsetail, mint, clematis, and bluegrass.

Mimulus washingtonensis is known to exist in this segment. *Rorippa columbiae* is suspected.

Fish

See Segment 6 for a discussion of fish in the North Fork of the John Day.

Wildlife

Wildlife on this segment is similar to that on segment 6, with elk and Lewis' woodpeckers being notable additions.

Cultural

Segment 7 has the most public land base of all the North Fork John Day River segments, although much of this is scattered in a patchwork fashion. No formal inventories of cultural values have been conducted. In 1992, however, an informal examination of selected public lands within the corridor did discover one small pit house village. Much of the public land within this corridor exhibits landforms not conducive to high probability for significant cultural resources.

Prior to 1830, segment 7 was occupied by Northern Paiute groups (Ray et al. 1938). It was only after this period, due to the introduction of the horse, firearms and disease, that the more northern Sahaptian-speaking groups (specifically the Umatilla and Cayuse) were able to push south to the John Day River. The North Fork then became the exclusive domain of the Umatilla. Today, this area is partially within the ceded lands of the Confederated Tribes of the Warm Springs. It also is within what the Confederated Tribes of the Umatilla and the Warm Springs consider a usual and accustomed joint use area. There are no known Native American religious sites or traditional use areas within this segment.

Historical use of public lands within the corridor has been limited to some farming as evidenced by an occasional irrigation feature found on the flats next to the river. All historic structures located along this segment are on private lands.

Recreation

This segment has abundant outdoor recreation opportunities but the number of users has been limited due to the very remote location and primitive road access. Boating is especially rewarding in this segment. But the river has only enough water for floating for a few weeks in the year during March, April, and May. The river is often too low to float in June and most people find the weather in March too harsh for boating enjoyment.

Fishing and hunting in this segment are excellent, attributed largely to the past low public use. Some of the river is accessible for fishing from the nearby primitive road and a portion of U.S. 395. Elk hunting is especially popular in this segment. The large percentage of private land limits fishing and hunting for most of the surrounding area. But the BLM-administered land is in sufficient quantity that visitors can find large tracts for recreating.

The primitive roads, abundant wildlife and great scenery would make this an attractive area for ATV and mountain bike touring on roads open to public use. These activities do not now occur in abundance, due undoubtedly to the very remote location.

There are 53 known undeveloped sites that have potential for camping, approximately 19 of which are on public land. A river access park, including a launch site, is being developed at Monument.

Wilderness

There are no WSAs or designated wilderness areas in this segment.

Resource Uses

Agriculture

Livestock grazing is the primary agricultural use of the lands along this river segment. BLM-administered lands are included in 6 grazing allotments (Table 40). Cattle are the principle livestock and they normally graze from the first of April through November.

Forestry

Timber harvesting has been an important use of this area for many years, especially in the upper portions of the segment. The land here has high value for growing timber and several timber companies own land in the area. The BLM controls extensive blocks on and near the river, and the state administers one significant parcel (RM 41-42). Past timber harvesting practices have preserved the scenic quality of the area. The past selective cutting and recent helicopter logging have not occurred in concentrations that are noticeable from the river.

Recreation

This river has received very low boating and non-boating recreation use in the past. But recently the number of boaters has increased dramatically. Boating use is increasing faster here than on any other river segment in the John Day System, according to observations of residents and car counts at river access sites. Boating is especially popular in association with fishing. The river is narrow with numerous fast water runs. Boaters are kept busy avoiding boulders and sweepers but seriously-dangerous rapids or falls are not present. Boating occurs early in

Table 40: Grazing Allotments in Segment 7

	Allotment	Category	BLM Acres	BLM AUMs	Grazing Season
Monument to Dale	19-20 #4083	I	160	26	4/1-11/30
	Neal Butte #4028	M	712	119	4/1-11/30
	Big Bend #4122	C	280	25	4/1-11/30
	Slickear Mt #4003	M	3,274	537	4/1-11/30
	North Fork #4029	M	1,894	316	4/1-11/30
	Johnny Cake #4042	C	280	30	4/1-11/30

the season due primarily to the short periods when water levels are sufficient to sustain a boat. During the last few years the quality of the scenery, low use, and good fishing have become known to many more people by word of mouth. Commercial outfitter use has been rare, with only two trips reported in the last six years.

Access for boaters is difficult. There are no public boat launch facilities. Boaters launching near Dale do so from numerous places with low banks where U.S. 395 or the dirt road pass near the river. These sites are being used regardless of land ownership. This creates a trespass situation for many boaters and conflicts with private landowners who do not approve of their land being used for such activity. A public boat-launching site is needed here.

Leaving the river near Monument has been more of a problem. This situation has been complicated because vehicles and trailers have been parked for several days in the Monument area awaiting arrival of the boating parties.

Recently the BLM, City of Monument, Grant County, and certain private individuals have begun construction of a river access park at Monument which will meet the parking and river access needs. A key tract of private land was donated for this purpose. This park initially will have vehicle access, a boat launch and toilet facilities. Eventually the park will be expanded to include picnic and camping sites and a hiking trail. Public use is expected to begin in the spring of 1994.

Non-boating recreation is almost totally fishing and hunting. Anglers and hunters have been low in number and usually are nearby residents. This use also is increasing, but not so dramatically as boating use. The primitive road which follows this segment provides access for hunting and fishing in most of the segment. Some landowners are opening their lands to fee hunting, a use that is expected to increase.

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue existing management. No facilities or public information would be provided. Public river access would continue to be well provided by the primitive road which follows this entire segment.

Boating use would continue to rapidly increase without limits and motorized boating would continue to be allowed.

Management Actions

Public Access

No additional public access would be provided.

Facilities

No public facilities would be provided, except to complete the public park access at Monument.

Information and Education

Minimum visitor information would be provided as described in Management Common to All Alternatives.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

No motorized boating restrictions would be imposed.

Alternative B: More Use and Development

Alternative Described

BLM would not limit boating use, support or provide a public river access site near Dale, or substantially increase public information about the area.

Boating use, including motorized boating, would not be limited.

Management Actions

Public Access

The BLM would support the USFS in their recommendation to provide a river access site at the old Woods Camp near Dale. About 10 acres of the existing BLM tract in Section 36, T. 6 S., R. 31 E., would be used if the Woods Camp could not be acquired. Legal public access would be assured from the road which follows the river downstream from U.S. 395 near Dale.

Facilities

The proposed public access site near Dale would include a boat launch, parking area, day use area and toilet.

The public access park at Monument would be completed.

Information and Education

Information, education, and interpretive signs and facilities would be provided at the proposed river access site near Dale and at the new access at Monument.

Boating Use Limits

No boating use limits would be imposed.

Motorized Boating

No motorized boating restrictions would be imposed.

Alternative C: Moderate Use and Development

Alternative Described

BLM would support or provide a public river access site near Dale and provide minimum necessary public information signs in the area.

Boating use would be limited to 75 percent of available campsites occupied each night. Motorized boating would be included in the 75 percent limit described above. No other motorized boating limits would be imposed.

Management Actions

Public Access

Same as Alternative B

Facilities

Same as Alternative B

Information and Education

Same as Alternative B

Boating Use Limits

Boating use would be limited to 75 percent of available campsites occupied each night.

Motorized Boating

Same as Alternative B

Alternative D: Low Use and Development

Alternative Described

BLM would support or provide a public river access site near Dale and provide minimum necessary public information signs in the area.

Boating use would be limited to 50 percent of available campsites occupied each night. BLM would seek to prohibit motorized boating.

Management Actions

Public Access

Same as Alternative B

Facilities

Same as Alternative B

Information and Education

Same as Alternative B

Boating Use Limits

Boating use would be limited to 50 percent of available campsites occupied each night.

Motorized Boating

BLM would seek to prohibit motorized boating.

Alternative E: Preferred Alternative

Alternative D is the preferred alternative.

Environmental Consequences

Water

Water quality could be slightly degraded by unlimited boating use proposed in Alternative A. Heavy use of this area without facilities would increase sanitation problems and reduce riparian vigor at popular recreation sites.

Vegetation

Unlimited boating use proposed by Alternative A would cause riparian vegetation vigor to decline in popular recreation sites along the river due to trampling and soil compaction by recreationists. This situation also would occur with Alternative B, but to a lesser extent because this Alternative has a cap on boating use.

Riparian vegetation also would be affected as described above with Alternative C. Impacts of Alternative C would be slightly less than with Alternative B because the boating use would be held to a lower limit.

Alternative D would have the least impact on riparian vegetation because it would impose the lowest boating use.

Facilities proposed in Alternatives B-E at the Monument Recreation Site would increase visitor use. Side canyons near this site where *Mimulus washingtonensis* is found could be impacted should visitors choose to hike as a part of their recreational activities. Normal recreational use under all alternatives is not expected to impact these species. *Rorippa columbiae*, if present, would occur along the riparian area and could be impacted by increased visitor use. Any others that may occur would most likely be found away from the river, on the steeper, more inaccessible hillsides away from the most likely areas of disturbance.

Fish

Fishing pressure is one of the most important factors affecting fish mortality. The most fishing pressure, and therefore most fish mortality, would occur with Alternative A which proposes unlimited boating.

The significant and moderate boating increases proposed in Alternatives B and C also would increase fish mortality proportional to the increased fishing pressure. Boating use limits might not have a dominating effect on fish mortality in the long term, however. This is because this river segment is almost entirely accessible by road, providing ample fishing access for non-boaters.

Wildlife

Unlimited boating use proposed in Alternative A would displace some wildlife species in the riparian zone during heavy use periods. Wildlife habitat would be slightly degraded at popular recreation sites due to heavy public use.

These impacts also would occur, but to a lesser degree, with Alternatives B and C which also provide for increased boating but not unlimited boating.

Alternative D, which provides the most limitations on boating numbers, would cause the least impact to wildlife.

Scenery

The only effects on scenery would occur near Dale where a public river access site is proposed in Alternatives B, C and D. The boat launch and associated facilities will be visible from the river and from the nearby public road.

Recreation Use

Boating use in this segment is low but increasing substantially each year. This trend is expected to continue. Boating use numbers, therefore, would increase rapidly with any Alternative. However, Alternative D would require boating limitations to be imposed in the near future to hold boating numbers at the lowest reasonable level. The boating use levels imposed by Alternatives B, C or D will be reached in the short-term.

Non-boating uses are expected to continue to increase gradually.

Recreation Experience

Alternative A would change the boating experience in this segment from few encounters with other boaters to frequent or constant encounters with other boaters. Competition for limited camping and stopping sites on public land would increase. Popular sites would become heavily impacted. Unlimited boating would increase the number of instances where boaters camp or stop on private land.

Alternative B also would change the boating experience. The present situation where boaters seldom encounter other boaters would change rapidly to frequent encounters with other boaters. Allowing boating to increase to where all public campsites are occupied each night would mean a significant increase in boaters. There are an estimated 19 public campsites in this segment within a total of 53 undeveloped campsites.

The recreation experience would not change substantially with Alternative C. The increase in boating use described in this alternative would cause more frequent encounters with boaters. However, there would be fewer encounters than in Alternatives A and B.

Alternative D would cause the least change in the recreation experience in this segment. In this case the recreation experience would not change significantly from the present, and this would appeal to those who are seeking a float trip in a primitive setting.

Alternatives B, C and D would require a permit system in order to impose boating limitations. Obtaining a permit and occasionally having a permit denied would detract from the experience of many boaters.

Social and Economic Conditions

Unlimited boating proposed in Alternative A would create a higher demand for tourist services in Dale and Monument. This also would occur with Alternatives B and C but the number of boaters would be the greatest in Alternative A.

There are very few residents along this river segment. But their social setting will change substantially with the increased boating allowed in Alternatives A, B and C.

Increased boating use would increase the incidences of boaters camping on private land. Many land owners in this segment strongly object to trespass on their property.

Alternative D would cause the least change to the present social and economic conditions of the area. These conditions will change, even with this alternative, due to increasing non-boating uses. But with the most limitation on boating use levels proposed in Alternative D, the change would be much more gradual.

Public Services

Demand for emergency services and law enforcement would increase greatly with Alternatives A, B and C. Alternative A would create the greatest demand because there would be no limitation on boating use. The communities of Dale and Monument are unable to adequately provide these services, especially in the remote portions of this segment.

Demand for emergency services and law enforcement also would increase with Alternative D. However, the limited number of boaters imposed with this alternative would be reached quickly. The remaining increases in recreation use would be in non-boating uses, which are increasing more gradually.

Segment 8: Dale to Headwaters

Affected Environment

Overview

Location and General Description

Segment 8 covers the upper stretch of the North Fork from its headwaters in the North Fork John Day Wilderness in the Blue Mountains down to the Umatilla National Forest boundary near Dale. Much of this segment lies in Grant County, with the last 7 miles flowing through Umatilla County. Mountainous forest land comprises most of the surrounding area in this segment. Much of the following information was taken from the North Fork John Day Wild and Scenic River Resource Assessment and the draft management plan for the river segment, both written by USFS. (See map 7f, page 161)

River Characteristics

The North Fork Subbasin provides the most important water quality and flow contribution to the John Day River System. This subbasin contributes more than 60 percent of the average annual discharge in the John Day Basin. The North Fork was gauged near Dale from 1929 to 1958. Lowest discharge generally occurs during July, August and September and climaxes between March and early June. Precipitation, occurring mostly as snow, can exceed 40 inches annually at high elevations in the Blue Mountains. Granite Creek is the major tributary in this segment. Elevations range from over 8,000 feet in the Blue Mountains to about 2,500 feet near Dale.

The North Fork has the highest level of water quality in the John Day Basin. Most of the subbasin streams of this segment are considered to be in good condition with generally satisfactory chemical, physical and biological

ratings except for high temperatures during the late summer months. Land management practices such as cattle grazing, timber harvesting, road construction, mining exploration activities in the headwaters and roadless areas significantly influence watershed conditions. Water quality in Granite Creek is affected by leaking and leaching of toxic mine effluents. Several government agencies have been working to try to lessen the continuing impacts of past dredging activities. The natural floodplain functions (meandering, pool formations, etc.) have been reduced due to the constraints from dredge tailing piles. Portions of the river in this segment have been identified as having high potential for soil erosion which coincides with a high degree of stream sedimentation.

Land Ownership and Classification

The majority of land in this segment is within the boundaries of the Umatilla National Forest. A few small parcels, totaling less than three miles in length, comprise the only existing private land along this stretch of river.

The North Fork of the John Day River from its headwaters to its confluence with Camas Creek was designated a Wild and Scenic River in 1988. The upper portion of this segment flows through the North Fork John Day Wilderness. This segment also is designated as an Oregon State Scenic Waterway beginning at the Wilderness boundary at Big Creek and ending far below segment 8 at River Mile 20.2 near Monument. The state scenic waterway classification for this segment is Accessible Natural River Area. The state guidelines for how private land should be managed within the state scenic waterway stretch of this segment can be found in Chapter V.

A Forest Service proposed Cougar Meadows Research Natural Area also encompasses a portion of the river drainage. The paved road which parallels part of the river was administratively designated a National Scenic Byway by the USFS.

These lands are located in Umatilla County, and are planned and zoned for grazing, farm use and big game winter range. There are two zones that affect the use of these lands. The primary zone designation is Grazing Farm (GF) and the overlay zone designation is Critical Winter Range overlay zone (CWR). The purpose of the GF zone is to protect grazing lands and other uses such as agricultural cultivation, watersheds, wildlife habitat and scenic values. In a GF zone the minimum lot size is 160 acres and parcels less than 160 acres may be allowed through a conditional use process. The density of dwellings allowed in this zone cannot be more than 1 dwelling for every 160 acres. The purpose of the Critical Winter Range Overlay zone is to conserve and protect important elk and deer winter range. The dwelling unit density is limited to a maximum of three dwellings within a radius of one half mile of any proposed dwelling. All requests for dwellings or land divisions that will result in eventual placement of a dwelling are referred to the ODFW for review and recommendation.

Public River Access

The river is quite accessible in most places due to the extent of federal land. A USFS all-weather road (#41) follows the North Fork upstream for 11 miles from Dale. Most of the road runs through National Forest land providing good access. The road number changes to #42 and is unsurfaced for about 7 miles, where it is adjacent to the river. From the end of the dirt road, a foot trail follows the river through the wilderness area for approximately 14 miles, where a side trail then diverts to the southeast. This trail ends at a gravel road, which parallels Granite Creek, a major tributary, for seven miles. The main trail continues to follow the North Fork northeast through the wilderness area to the headwaters.

Resource Values

Wild and Scenic River Designation

Outstandingly Remarkable Values for this segment were identified by Congress and by the Umatilla National Forest's Resource Assessment for the North Fork John Day Wild and Scenic River. These values include scenery, cultural, recreation, fisheries, and wildlife.

Scenery

The headwaters area is located in the glaciated Elkhorn Mountains. The river flows through stands of lodgepole pine, interspersed with fingers of mixed conifers. Spruce and western larch also are found near the river. Subalpine fir is present above 6,000 feet in elevation. Outside the wilderness on the north side of the river there is evidence of past mining and ponderosa pine harvest activities. Huge piles of dredge tailings, caused by historic mining operations, are visible. Today, active mines near Dale, Granite and the headwaters are not nearly as degrading. Several large meadows and other smaller wetland areas provide diverse scenery and outstanding wildlife habitat. An old growth aspen stand along the river corridor is a notable plant community feature.

Progressing downstream, a similar species mix is found, with some rock outcrops and steep side slopes into the river canyon. Below the wilderness boundary, rimrock topography is common, with scattered fingers of trees. Below Horse Canyon there is a sheer rock cliff area confining the river for about 3/4 of a mile. The tree species, where present, are typically ponderosa pine, Douglas fir and western larch. Scenery is considered an Outstandingly Remarkable Value by Congress and in the North Fork John Day Wild and Scenic River Resource Assessment.

Vegetation

At an elevation of 8,000 feet, the headwaters is characterized by a broad vegetation zone of whitebark pine. As the river moves down hill, a subalpine fir and lodgepole forest zone takes over. Still lower, grand fir begins to dominate the scene, and finally, a ponderosa pine zone. Several large meadows, smaller wetlands, and an old growth aspen stand provide diversity to the area.

The riparian areas along the North Fork and tributaries have been historically disrupted by mining and dredge tailings are prominent. Dogwood and willows are slowly beginning to establish themselves in the tailings, indicating that these huge piles of rock are only now starting to heal. Currently active mines are not as harmful to the vegetation as the historic mines were. The riparian vegetation in the wilderness area is in very good condition.

There are currently no listed sensitive plants along the North Fork. Eighteen species were delisted between the years 1984 and 1991 after the USFS conducted extensive field surveys. At least 6 listed species of grape fern (*Botrychium*), however, have been confirmed as thriving in a four square mile perimeter of Desolation Meadows along a tributary to the North Fork.

Fish

The North Fork Subbasin is the major producer of wild Spring Chinook salmon and summer steelhead in the John Day Basin. Approximately 70% of the total basin Spring Chinook and approximately 43% of the steelhead are produced in this subbasin. These are the largest spawning populations of wild Spring Chinook and summer steelhead remaining in the Columbia River System.

This segment and its tributaries contain many miles of spawning and rearing Chinook habitat. The Chinook runs are native to the John Day Basin and have never been supplemented with hatchery stock. The run contributes to commercial, sport and tribal harvests. However, since 1978, sport harvest has been closed and tribal harvest has been very limited. Declines are at least partially due to logging, road building and poaching. Habitat improvement projects, however, have been underway since the late 1980s in an attempt to counteract these problems.

Granite Creek is the most important wild Spring Chinook spawning and rearing tributary in the North Fork drainage. The Granite Creek System, including Clear and Bull Run Creeks, produces 20 percent of the total John Day Basin Spring Chinook. Granite Creek also supports a healthy population of native wild steelhead, one of the last major populations of native bull trout (Dolly Varden) and a viable rainbow trout population. The bull trout is listed on the USFS Region 6 and State Sensitive Species List, and is in Category 2 according to the U.S. Fish and Wildlife Service. The North Fork meets the bull trout's specific habitat requirements and is thought to have one of the few remaining healthy bull trout populations in the state. An important subspecies of rainbow trout, the redband trout, exists in the North Fork.

Other major species which historically occupied this drainage include Pacific lamprey, sculpin, and mountain whitefish. Less is known about their current population sizes and distribution, although whitefish generally are abundant throughout western North America. Whitefish and Pacific lamprey have not been an important commercial or sport harvest species, but have contributed to tribal harvests.

The importance of the fish and associated habitat present in the North Fork made it a high priority for inclusion in the Oregon Wilderness Act of 1984. Additionally, fish have been found to be an Outstandingly Remarkable Value by Congress and by the North Fork John Day Wild and Scenic River Resource Assessment. There are more fish spawning sites inside the designated wilderness than outside. This is due to the highly-oxygenated, cold, clear water flowing over excellent spawning gravel plus the adequate amount of large woody material in the river creating diverse habitat for fish. The large amount of river drainage under wilderness protection contributes to the maintenance of cold water temperatures in the lower North Fork as well. Inside the wilderness the 1992 Chinook index count was the highest on record at 28 redds per mile.

Overall, the spawning, rearing and holding habitat for anadromous and resident salmonid fish is good throughout this river corridor. There is a fair amount of granitic spawning gravels and cobble, and boulder-sized substrate, the latter contributing to the habitat for invertebrate fish food. Sufficient finer substrate conditions exist due to the granitic parent material in the headwaters. There is a plentiful amount of large woody debris in the river which helps to diversify habitat and create pools.

Wildlife

The wildlife population is diverse and thought to be generally stable. The North Fork John Day River Drainage serves as a major migration route for big-game species. Approximately 2,500 Rocky Mountain elk use the drainage to migrate from their summer range in the Elkhorn

Mountains to their winter range in Bridge Creek Wildlife Management Area. Another 1,000 mule deer utilize the drainage for a similar migration route. A small population of whitetail deer resides in the dense, brushy habitat found at lower elevations. Documented sightings of black bear, cougar, bobcat, and wolverines have been made in the drainage. By the number and frequency of sightings, it is thought that both the black bear and bobcat populations are moderate. Less is known about the others, but populations most likely are low.

Threatened bald eagles, golden eagles, and osprey have been observed near the lower boundary of this section and may well be found within this segment as well. There is a variety of woodpeckers found in the river corridor, including pileated woodpeckers, an indicator species of old-growth habitat. Goshawks and great gray owls also utilize the area as do mammals such as mink and beaver. It is probable that river otters also reside in the corridor.

In general, the wilderness exhibits excellent wildlife habitat and the rest of the corridor tends to be in fair condition. In the upper reaches, a 20,000 acre sheep allotment has been vacant for many years, having last been grazed by domestic livestock in the 1950s. Therefore, the natural wet meadows in this upper portion are near pristine, and provide high quality habitat for big game, hawks, owls, and small mammals. The riparian condition is very good in the wilderness.

Impacts from resource use and management such as timber harvest, mining, road building, and fire suppression have degraded portions of the river corridor, generally outside of the wilderness. Some of the flat, open meadows and riparian areas have been impacted by recreational activities. The amount of dead and dying trees due to insect infestations and recent fires have created very good habitat for a variety of woodpeckers and great gray owls. The burned areas also provide a diversity of habitat which is excellent for foraging deer and elk. Wildlife is considered to be an Outstandingly Remarkable Value by Congress and the North Fork John Day Wild and Scenic River Resource Assessment.

Cultural

The North Fork corridor had been used by the Southern Plateau Indians. In particular, ancestors of the Confederated Tribes of the Umatilla Indian Reservation are said to have used this area heavily in prehistoric times for hunting, fishing, camping, root digging and berry picking. However, surveys on federal land in the river corridor have not identified more than a few prehistoric sites.

The drainage is included within the ceded boundaries of the Confederated Tribes of the Umatilla Indians (Cayuse, Walla Walla, and Umatilla Tribes). The Confederated Tribes of the Umatilla have provided information to the Forest Service indicating that they have an extensive array of documented usual and accustomed sites for fishing, hunting, camping, root digging, berry picking, and other cultural and traditional uses. The Confederated Tribes of the Warm Springs are said to have pursued "usual and accustomed" activities in this area as well.

Gold mining is a long and well-established activity along the North Fork and it continues to this day. It was the primary activity which first brought substantial numbers of people to the Blue

Mountains in the 1860s, and evidence of this gold rush still exists along the river. Gold occurs in the sand and gravel deposits along the river. Many of the mounds of hand-stacked boulders and thousands of feet of ditches and flumes are testimony to the 1860s gold rush that produced an estimated \$5,000,000. Additional evidence of this rich history includes various structures for habitation and use, such as mines and prospect holes. Other minerals such as silver, copper, lead, zinc, chromite, and manganese also have been produced in small quantities.

Peavy Cabin, just outside the Wilderness boundary, is eligible for the National Register of Historic Places. It was built around 1934 by the Dean of the School of Forestry of Oregon State University, who conducted experimental forestry studies on a 40-acre tract of surrounding forest. It is currently used as a Forest Service administration site. The historic value of the North Fork drainage is considered an Outstandingly Remarkable cultural value by Congress and by the North Fork John Day Wild and Scenic River Resource Assessment.

Recreation

The North Fork corridor provides a wide variety of recreational opportunities. The two river segments in the Wilderness are paralleled by trails for both hiking and horseback riding. Several of these trails lead to the Elkhorn Crest National Recreation Trail. This trail follows the crest of the glaciated Elkhorn Mountains and affords spectacular views of the North Fork John Day River headwaters.

The portion of this river segment outside of the wilderness is easily reached by roads. Visitors to the area often travel the Elkhorn Drive National Scenic Byway, which is adjacent to part of the North Fork John Day Wild and Scenic River. It is the main route by which visitors enter the entire area to recreate.

Heaviest use in the river corridor occurs in the summer and fall seasons, and is primarily associated with camping and big-game hunting. A number of campgrounds have a primitive or limited level of development, and dispersed camping in open areas and flat spots along the river is popular. Big game hunters utilize these areas heavily during the fall in search of the high quality hunt for which this area is known. Several trailheads provide access to the wilderness trails.

Fishing along the banks of the North Fork also is very popular, while recreational gold panning is another activity pursued by visitors. Steelhead, resident trout and smallmouth bass (below Dale) provide a substantial recreational fishery for anglers. In the early 1980s between October 1 and April 15, some 10,000 recreation days were spent angling for steelhead on the North Fork as a whole while trout and bass fishing (below Dale) generated another 2,500 to 5,000 angler recreation days. Only during the spring runoff period are the last few miles of this segment floated by rafts, canoes, or kayaks. Pursuit of this recreational opportunity is modest. Some snowmobiling occurs during the winter months. Congress and the North Fork John Day Wild and Scenic River Resource Assessment have called recreation on this stretch of river outstandingly remarkable.

Wilderness

The USFS manages the North Fork John Day Wilderness Area in the upper reaches of the North Fork.

Management Situation and Land Uses

This plan does not propose alternatives or analyze impacts for this segment because BLM administers almost no land along the river. The present situation is described to allow the reader to gain a more complete picture of the entire river system.

The Umatilla National Forest administers the majority of land and water in this river segment which is designated as a Wild and Scenic River. The management goal of the Forest Service Plan for this area is to maintain and enhance water quality and maintain high levels of anadromous fish habitat on an area-wide basis. The Oregon State Scenic Waterway below the Wilderness boundary is administered by the OPRD. A few small parcels of private land are concentrated at the lower elevations and patented mining claims form small, private enclaves within the federally-managed land.

Recreation is the major use of this river segment. It flows through or past several specially-designated areas such as the wilderness and the National Scenic Byway. Livestock grazing also takes place while, downstream from the wilderness boundary, some timber harvest occurs as well. Mining historically has been an important economic activity in the subbasin and exploration activities continue.

The USFS has provided the following information from the Umatilla National Forest Plan.

The Desired Future Condition of this Area

In riparian areas of the North Fork of the John Day River (Dale to the headwaters), a natural to near-natural setting and vegetation development will predominate, with a variety of plant communities, sizes, and age classes. A

high tree canopy layer will be present, and the forest will appear denser than surrounding areas. Forest canopy of conifers and hardwoods will provide desired levels of stream surface shading and long-term supply of large woody material for instream fish habitat and snags. Vegetation will contribute to stable streambanks and complex fish habitat along the banks. Dispersed recreation opportunities associated with stream and stream sides will be available for all forest visitors.

In upland areas of the watersheds, the forests will appear as a mosaic of even-aged and uneven-aged stands with highly dispersed, created openings of 1 to 40 acres in size. Management

activities of all types will be observable. Horizontal and vertical diversity in vegetation will be apparent; also, a discontinuity in forest age classes (noncontinuous and fewer age classes) will be noticeable within a watershed.

Emphasis placed on careful timber harvest and road construction and maintenance will be reflected in the high quality water being produced. Dispersed recreation opportunities of all types will be available, though some limitations in access may occur. As a result of management, anadromous fish recovery and long-term fish population goals will be met.

River Description

The Omnibus Oregon Wild and Scenic Rivers Act of 1988 designated 54.1 miles of the North Fork John Day River from its headwaters in the North Fork John Day Wilderness to its confluence with Camas Creek, in the following classes:

Segment A (Wilderness)	Wild River: The 3.5-mile segment from its headwaters in the North Fork John Day Wilderness at section 13, T. 8 S., R. 36 E., to the North Fork John Day Wilderness boundary.
Segment B	Recreational River: The 7.5-mile segment from the North Fork John Day Wilderness boundary to Trail Creek.
Segment C (Wilderness)	Wild River: The 24.3-mile segment from Trail Creek to Big Creek.
Segment D	Scenic River: The 10.5-mile segment from Big Creek to Texas Bar Creek.
Segment E	Recreational River: The 8.3-mile segment from Texas Bar Creek to its confluence with Camas Creek.

For the purpose of interim management the Forest Service, as the lead agency, established a corridor width of $\frac{1}{2}$ mile on either side of the river. The final corridor boundary will be determined as part of the wild and scenic river management plan development.

The State Scenic Waterway segment which overlaps with the federal Wild and Scenic River segment is designated from the North Fork John Day Wilderness boundary (Big Creek) to Camas Creek.

The boundaries for the State Scenic Waterway are set at $\frac{1}{4}$ mile on each side of the river and will not change.

The National Forest Service is developing a Wild and Scenic River Management Plan for this river segment.

E. Middle Fork Segment

Segment 9: Middle Fork

Affected Environment

Overview

Location and General Description

The Middle Fork John Day River, a tributary to the North Fork John Day River, is located entirely within Grant County, draining a subbasin of approximately 806 square miles. The Middle Fork flows northwest from its source in the Blue Mountains of the Malheur National Forest for over 75 miles before entering the North Fork at RM 32.2. The subbasin has highly variable terrain with elevations ranging from about 2,200 feet near the mouth to over 8,100 feet in the headwater areas. (See map 7f, page 161)

The largest community near the Middle Fork is Long Creek, with a population of 245. Other communities closer to the river include Ritter, Galena, Susanville, Austin, and Bates. Highway 395 passes north to south through the western portion of the subbasin and Highway 26 through the southeastern headwater area. In addition, an improved road parallels the Middle Fork for most of its length.

River Characteristics

Hydrology

The stream gradient of the Middle Fork John Day River averages 40 feet per mile, but steeper gradients are present in the upper reaches and in tributaries. Long Creek is the major tributary. Other tributaries include Big, Vinegar, Bridge, Camp, Clear, and Squaw Creeks.

The Middle Fork has been gauged at Ritter since 1929. Mean annual discharge at Ritter is 186,464 acre-feet annually. This accounts for about 25 percent of the estimated flow of the North Fork. Based on the Ritter gauge, peak discharge generally occurs between March and early June, and lowest flows occur during the months of August and September (OWRD 1990).

Water Quality

Water quality in the Middle Fork Subbasin generally exhibits satisfactory chemical, physical, and biological quality except when flows are extremely high or low. The most serious water quality problem in the subbasin is elevated temperatures. Sediment and erosion problems generally are not serious although localized streambank erosion does occur in some meadow areas where streams meander (OWRD 1990).

Most tributaries of the subbasin drain higher elevations and are shaded. Thus, high temperatures are not extensive and do not represent long term problems. The mainstem Middle Fork of

the John Day, however, often exhibits high temperatures that threaten optimum use by cold-water fish. The main cause is riparian habitat degradation through overgrazing by livestock. Higher than optimum temperatures for salmonids will continue to occur as a result of natural low flows and irrigation withdrawals in the late summer. Past mining and dredging of the main river also has created some damage to riparian vegetation. Dredge tailings limit the rate of revegetation.

Some tributaries exhibit elevated fecal bacteria counts during summer months, probably as a result of use of surrounding areas for cattle grazing. Water-contact recreation or use of these streams for domestic purposes poses potential health risks.

Land Ownership and Classification

The vast majority of river frontage of the Middle Fork is privately owned, even though the first thirty miles are located within the Malheur National Forest Boundary. Lands along the river in the national forest are primarily privately owned "inholdings". These private lands are used primarily for livestock grazing. After leaving the national forest, the river flows another 45 miles to its confluence with the North Fork. Land along this portion of the river is almost totally privately owned. BLM administers four small tracts that total about two miles out of these 45 river miles. There are no BLM grazing allotments in this segment. This segment was not designated a National Wild and Scenic River.

The Middle Fork is a designated Oregon State Scenic Waterway from its confluence with the North Fork to Crawford Bridge (RM 71).

From Crawford Creek bridge downstream to Big Creek (RM 39) the lands adjoining the river are planned and zoned by Grant County for forest management. Lands adjoining the river between RM 27 and RM 33 also are planned and zoned for forest management. The zone designation is Primary Forest, (F-80 (160)). This zone is applied to the highest and best producing forest lands in Grant County. The zone is intended to protect forest lands for commercial growing and harvesting of timber and conserve and protect watersheds, wildlife habitat and scenic and recreational values.

In an F-80 zone the minimum lot size for new farm or forest parcels is 80 acres and the total number of principal and secondary homesites cannot exceed an overall density of 1 dwelling for every 160 acres.

The segment between Big Creek (RM 39) and RM 33 and the remaining lower segment of the river from RM 27 to where the Middle Fork joins the North Fork are planned and zoned for use as rangeland. The zone designation is Multiple Use Range (MUR-40(160)) and it is applied to agricultural and non-productive forest lands which are managed primarily for range and grazing use. In this zone a lot or parcel of 160 acres or more is considered a farm unit. A lot or parcel of less than 160, but not less than 40 acres, can be approved as a farm unit through a conditional use process. The total number of dwellings allowed in the zone are not to exceed an overall density of one unit for every 160 acres.

Public River Access

The Middle Fork flows through a canyon with no vehicle access for 10 miles up from the confluence. This section flows through 97% private land with 2 small sections of public land near the confluence. For the next 3 miles a paved county road follows the river to Ritter Hot Springs through private land. From Ritter to Highway 395 (10 miles), the county paved road follows the Middle Fork through private land except for two small parcels of public land. There is a county all-weather road from US 395 for 17 miles to the USFS boundary. It travels through 3 small parcels of BLM land. From the USFS boundary there is an all-weather gravel and paved road (County #20) for the entire length to Austin Junction, with many good public access points to the river on USFS land. Middle Fork and Deer Horn Campgrounds are two National Forest river access points. Part of this section flows through private land and access to the river there is by permission only. Near Austin Junction on US 26, the river (Squaw Creek) flows through USFS land along the highway from its source near Rock Creek Springs near Blue Mountain Summit.

Resource Values

Scenery

This segment exhibits broad scenic values including a great variety of vegetative communities and dramatic landforms. Most of the Middle Fork flows through private lands used primarily for grazing, with occasional ranches, barns and range developments visible. Much of the riparian vegetation has been removed and replaced by pasture. Some portions of the river have had

the channel altered by heavy equipment. The upland areas vary from dense, tree-covered mountain settings in the upper portion, to alternating grass and juniper-covered hills in the lower portion. The river and surroundings are very scenic despite the often poor riparian conditions.

The visual character of this river subbasin changes as one moves downstream. From Crawford Creek bridge (RM 75) downstream to Vinegar Creek (RM 65) the terrain adjoining the river is generally hilly with elevations ranging from 5000 feet to 4000 feet. This part of the basin includes clearings with irrigated fields and grazing in the river floodplain. The surrounding hills are forested with mixed stands of pine and fir, white fir, Douglas fir and larch.

The terrain in the stretch below Vinegar Creek to Big Creek (RM 39) is visually more dramatic than the terrain above Vinegar Creek. This part of the river corridor is more defined as a broad valley between mountain ridges 10 miles apart. These ridges include the Greenhorn Mountains northeast of the river that reach elevations of 8000 feet. The mountains southwest of the river generally range from 4000 feet to 6000 feet in height with the exception of Dixie Butte which is almost 8000 feet.

The river corridor from Big Creek (RM 39) to where the Middle Fork enters the North Fork narrows from 6 to 8 miles (from ridge to ridge) to 2 to 3 miles. This part of the segment is more

arid than the upper part. The vegetation here is composed of grasses and shrubs with a scattering of trees near creek bottoms. The river bank and terraces contain willows, water birch and ponderosa pine that provide beauty, color and texture to the landscape.

Vegetation

Riparian vegetation is a mix of communities including sedges, grasses, willows, water birch, ponderosa pine, with a large percentage in rock and gravel. In addition to the species already mentioned, other common plants include clovers, bluegrass, horsetail, Reed canarygrass, mint, teasel, western juniper, sagebrush, and bunchgrasses. In most areas the sedge/grass communities dominate the banks, with willow and water birch dominating back from the water edge. This condition is common on the river, giving the majority of the river a low (or nonexistence) canopy cover of vegetation. On portions of the river the combination of shrub and tree species raises the canopy value to 45%, however, this is lower than the potential. The open bank condition is presently maintained by ice flows, scouring during high water and livestock grazing. Overall vegetative quality is fair, with about 15% of the riparian area in good condition and 15% in poor condition. Potential for improvement of vegetative quality is good.

Fish

The Middle Fork subbasin produces 24 percent of the total Spring Chinook and 30 percent of the total summer steelhead populations in the John Day Basin. Currently as many as 770 adult Spring Chinook and 6,000 adult steelhead migrate annually into the subbasin to spawn. The Middle Fork also supports a productive trout fishery. A healthy resident trout population is supplemented in some years with 3,000 legal hatchery rainbows. Trout and steelhead provide 2,000 to 3,000 and 300 to 500 annual recreational angling days respectively on the Middle Fork.

In recent years habitat for salmon and steelhead has improved, primarily because of the removal of a diversion dam and the Bates Sawmill which was blocking fish passage and causing water pollution. Consequently, anadromous fish production, particularly that of Spring Chinook, has increased as fish now are able to use the Upper Middle Fork System. Approximately 30 miles of spawning and rearing habitat for Spring Chinook are available in the Middle Fork between Armstrong and Summit Creeks. An estimated 295 miles of spawning and rearing habitat also are available in the Middle Fork and tributaries to support steelhead production. Major steelhead-producing streams in the drainage include Camp, Indian, Granite, Boulder, Deep, Beaver, Clear, Big Boulder, Deerhorn, Vinegar, Vincent, Davis, Long, Butte, Big, Huckleberry, and Slide Creeks.

In low water years, both salmon and steelhead production in the subbasin are affected by low flows and high stream temperatures in the Middle Fork below US 395. These conditions restrict passage to and limit the amount of useable habitat within potential spawning, rearing, and adult holding areas. For example, in Clear Creek, one of the major producing streams in the subbasin containing both salmon and steelhead, rearing for Spring Chinook often is limited during low water years. Clear Creek supports annual production of 40 to 80 adult steelhead and 6 to 15 adult Spring Chinook spawners as well as a wild trout population.

Wildlife

Wildlife diversity on this segment is high, due to the variety of vegetative structure found here. Since much of the habitat is intact, but only in fair condition, the numbers of species and total numbers of animals may be less than expected. Common species include beaver, river otter, robins, kingfishers, mule deer, elk, great blue herons, killdeer, garter snakes, spotted sandpipers, rattlesnakes, Pacific tree frogs, redtail hawks, prairie falcons, chukar, Lewis' woodpeckers, raccoons, and great horned owls. Bald eagles utilize the area as winter range, with several nocturnal roost sites documented.

Cultural

Segment 9 has little public land within the river corridor. No cultural resource inventories have been conducted. The landforms within these few public lands, however, indicate that a moderate potential for significant cultural resources exists.

Prior to 1830, segment 9 was occupied by Northern Paiute groups (Ray et al. 1938). It was only after this period, due to the introduction of the horse, firearms, and disease, that the more northern Sahaptian-speaking groups (specifically the Umatilla and Cayuse) were able to push south to the John Day River. The Middle Fork then became the exclusive domain of the Umatilla. Today, this area is partially within the ceded lands of the Confederated Tribes of the Warm Springs. It also is within what the Confederated Tribes of the Umatilla and the Warm Springs consider a usual and accustomed joint use area. There are no known Native American religious sites or traditional use areas within this segment.

Historic use of this segment appears to have been principally related to farming and ranching. No historic settlements or travel routes are recorded for this segment.

No information is available on the paleontological resources of this segment.

Recreation

Recreation opportunities are primarily limited to the national forest lands located on the river. There are a few widely dispersed recreation sites in this area which provide public river access for fishing, camping, hunting, and hiking, but no inventory of campsites has been made. Water levels usually are not sufficient for boating on this segment. Two developed campgrounds (Middle Fork and Deer Horn) are managed by the USFS.

Public recreation opportunities are limited downstream from the national forest due to private land and limited public access.

Wilderness

There are no designated wilderness areas or WSAs in the Middle Fork System.

Management Situation and Land Uses

This plan does not propose alternatives or analyze impacts for this segment because BLM administers almost no land along the river. The present situation is described to allow the reader to gain a more complete picture of the entire river system.

The vast majority of land along the Middle Fork is privately owned, used primarily for livestock grazing. Past land management practices, especially on private land, have included using heavy equipment to cut channels for the river. The natural riparian vegetation was removed by these actions, and recovery from the present situation is occurring, but will take many years.

The Oregon State Scenic Waterway designation may influence some practices on private land.

Recreation use occurs primarily along the uppermost 30 miles of this river in the national forest. Peak use periods are the spring and summer for fishing and the fall for hunting. Use of this area is generally light, but increasing.

F. South Fork Segments

Segment 10: Mainstem Confluence to County Road 67

Affected Environment

Overview

Location and General Description

This segment begins at Dayville where the South Fork enters the Mainstem of the John Day River. It extends upstream to the south for 35 miles until it reaches County Road 67, near the community of Izee.

This segment includes a narrow canyon with high steep hillsides. The hillsides and riparian areas are forested with frequent rock outcrops.

The South Fork road follows the river for the full length of this segment. It has an all-weather surface and is open year-round.

This river segment does not contain enough water for boating but is popular for fishing, hunting, and camping.

River Characteristics

Hydrology

Flowing northward from its headwaters in the Ochoco and Aldrich Mountains, the South Fork John Day River drains an area of approximately 607 square miles, entering the Mainstem John Day at Dayville. Subbasin elevations range between about 2,300 feet to 7,400 feet above sea level. Most of the subbasin is located in Grant County.

The stream gradient over the 60 mile course of the river is about 47 feet per mile. Major tributaries are Murderers Creek, Black Canyon Creek, and Deer Creek.

The South Fork near Dayville was gauged intermittently for 10 years between 1910 and 1930. Average annual discharge at the mouth is an estimated 100,000 acre-feet. A permanent gauging station was installed on the Lower South Fork in 1989.

Subbasin discharge is greatest during the winter months. Discharge generally peaks in late April, which coincides with maximum snowmelt runoff, and is lowest in September. During the low-flow period of July through October the demands for irrigation, fish maintenance, and water quality are greatest.



MAP 7h

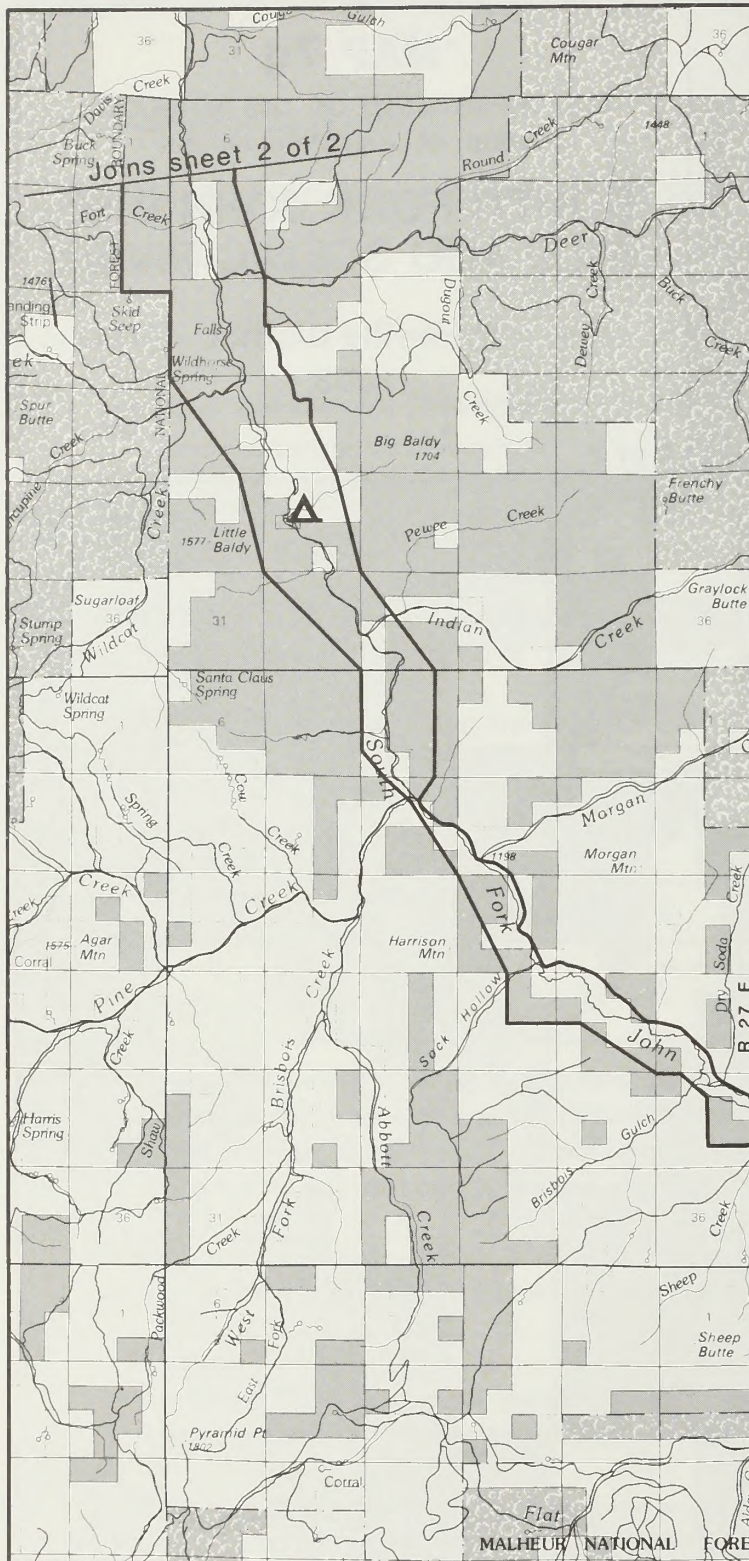
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

SOUTH FORK JOHN DAY WILD AND SCENIC RIVER






Prineville District
1993

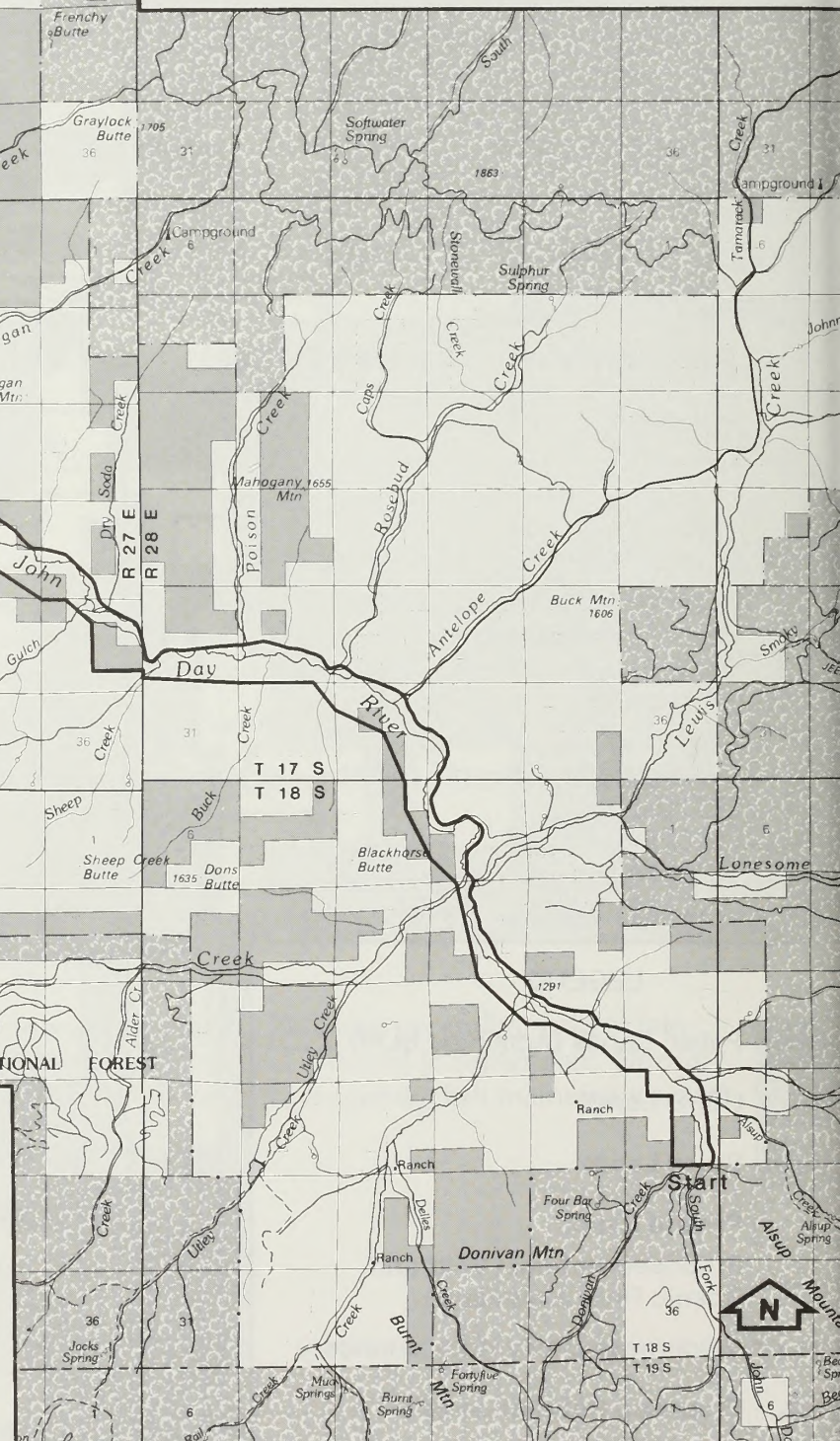
1 of 2

1 0 1 2 3 Miles



LEGEND

-  Public Lands (Admin by BLM)
-  USFS Lands
-  Private Lands
-  Proposed National Wild and Scenic River Boundary
-  Proposed Recreation Site



Water Quality

On an annual basis, the surface water of the South Fork Subbasin generally exhibits satisfactory chemical, physical, and biological quality. Seasonal high and low streamflows create periodic surface water quality problems. The primary problems are sediment loading during high-flow periods and extreme high water temperatures during low-flow periods. These may be partly the result of vegetation disturbances and riparian zone degradation.

High sediment loads are present in the subbasin's streams during peak runoff and as a result of intense thunderstorms. The major impacts of sediment loading affect fish habitat. Sediment alters the material composition of the stream channel by smothering spawning gravels and by filling pools used for rearing. No individual factor is solely responsible for producing the conditions leading to vegetation removal, erosion, and sediment loading. According to ODFW, livestock grazing has had a significant impact. However, timber removal, road construction, farm practices, stream channel disturbance (dredge and fill activities), and natural conditions also have contributed.

Headwater areas of the Upper South Fork have severe to moderately severe sheet, gully and streambank erosion, with resultant sedimentation problems. The most severe problems are in the Lewis Creek, Corral Creek, and Flat Creek areas.

Water temperatures as high as 77 degrees F have been recorded in the South Fork Subbasin near Izee and are the result of low streamflows, lack of streamside shade and the broad shallow nature of the river. Livestock grazing and noxious weed spraying in the upper watershed have reduced the vegetation which is needed for streambank stability and shading the water. Excessively high water temperatures delete the dissolved oxygen content in the water and seriously affect fish rearing, particularly salmonids. High water temperatures are conducive to the growth of disease-causing bacteria.

Land Ownership and Classification

Most of the land along the river in this segment is administered by BLM, with occasional tracts of private land scattered throughout its length. The USFS administers about one mile of river frontage, and ODFW also manages tracts of land along the river.

Most of this segment was designated as a Federal Wild and Scenic River by the Oregon Omnibus Wild and Scenic Rivers Act of 1988. The Act designated the 47 mile segment from the Malheur National Forest boundary to Smokey Creek as a recreational river. The entire Wild and Scenic portion of the South Fork is administered by the BLM through interagency cooperation with other federal, state, and local government agencies.

The 29 mile segment between the Post-Paulina Road (County Road 67) crossing to the north boundary of Murderer's Creek Wildlife Area was designated a State Scenic Waterway in 1988. Oregon State Scenic Waterway boundaries are located one quarter mile from the mean high water line on both sides of the river. The entire length of the Oregon State Scenic Waterway lies

within the Federal Wild and Scenic River stretch, though in some cases the state's quarter mile boundary on both sides of the river may exceed the proposed federal boundary.

The state scenic waterways classification for this segment is Accessible Natural River Area. The state guidelines for how private lands should be used and managed in the state scenic waterway stretch of this segment can be found in Chapter V.

Portions of the Aldrich Mountain Wilderness Study Area (WSA) are included within the proposed wild and scenic river boundaries for a total of approximately 2.5 miles. This WSA additionally borders approximately 1 mile of the proposed wild and scenic boundary. The wild and scenic proposed boundaries also overlap approximately 160 acres for a total of approximately one and a half river miles of the Black Canyon Wilderness managed by the USFS. A 50 mile National Back Country Byway follows the South Fork from Dayville to the border of the Malheur National Forest. Within this segment there are approximately 20 acres of commercial forestland classified as fragile restricted and approximately 100 acres classified as withdrawn.

A proposed addition to the Oregon State Recreation Trails System would pass through the designated portion on an east-west route near the Murderer's Creek drainage. Murderer's Creek Wild Horse Herd Management Area, administered jointly by the USFS and the BLM, is adjacent to a portion of the river and consists of 143,000 acres. In addition, the 26,000 acre Murderer's Creek Wildlife Management Area adjoins a portion of the river and is a cooperative federal, state, and private effort managed by the ODFW.

From Dayville upstream to the Post-Paulina Road (County Road 67), the lands adjoining the river are planned and zoned by Grant County for use as rangeland. The zone designations are "Multiple Use Range" (MUR-40(160)) and Significant Resource Combining Zone (SR) which is an overlay zone. The MUR-40 (160) zone is applied to agricultural and non-production forest lands of Grant County managed primarily for range and grazing use. In this zone a lot or parcel of 160 acres or more is considered a farm unit. A lot or parcel of less than 160, but not less than 40 acres can be approved as a farm unit through a conditional use. The total number of dwellings allowed in the zone is not to exceed an overall density of one unit for every 160 acres.

The Significant Resource Overlay Zone extends from the north boundary of the Murderers Creek Wildlife Area upstream to RM 33. The purpose of the Significant Resource (SR) Zone is to protect significant mineral resources, scenic areas, natural areas and fish and wildlife habitat in Grant County, and to permit development which is compatible with such protection. This zone is applied to those sites worthy of protection against conflicting uses. According to subsection 7.G. of this zone, Grant County will consult with OPRD when a use or activity is proposed.

Public River Access

A paved county road follows the South Fork through approximately 4 miles of private land from Dayville upstream, then through 6 miles of mixed state and BLM land ownership. The road continues but becomes a BLM road at this point. There is good access to the river for

hiking, camping, and fishing on the public land portions. After the paved road segment, an all-weather gravel road continues along the river for 20 miles, with frequent river access points on public land.

Resource Values

Wild and Scenic River Designation

The South Fork of the John Day River from Smokey Creek to the Malheur National Forest Boundary near the headwaters was designated as Wild and Scenic by the U.S. Congress in 1988. The law identified certain outstandingly remarkable values and other significant values which must be protected and enhanced by the managing agency. The BLM developed a Resource Assessment which further defined these values and identified additional values to protect and enhance. The following table is a summary of the outstandingly remarkable and significant values identified by Congress and the BLM.

Scenery

The South Fork of the John Day River contains striking and unique scenic values with a wide variety of vegetation, color, and interesting landforms. Scattered ponderosa pines and an occasional Douglas or white fir intermix with juniper, sagebrush, and native bunchgrasses to create a distinct vegetative pattern on the steep canyon slopes. Lined with a colorful assortment of streamside vegetation, the river's edge makes a picturesque centerpiece to the rugged scene. In the upper reaches of the river, relatively level agricultural land forms a more pastoral setting.

The canyon is geologically scenic as well. Exposures of columnar jointing and feeder dikes are very impressive at places along the river, particularly between Smokey and Oliver Creeks, and in the gorge near Black Canyon Creek.

Table 41: Resource Value Ratings, South Fork John Day River

	Value	Congressional Rating BLM
Rating		
Scenic	O	O
Recreational	O	O
Fishery	-	O
Wildlife	S	O
Geologic	-	S
Paleontologic	-	O
Botanical	-	O
Prehistoric/Traditional Use	-	(S)
Historic/Cultural	-	(S)

Note: O = Outstandingly Remarkable
S = Significant

The river itself is small and turbulent with numerous small rapids interrupted by occasional deep holes and a stepped drop of 55 vertical feet at Izee Falls. A number of deep drainages and tributaries, also lush with riparian vegetation, intersect the river as it flows downstream. Large basalt outcrops protrude from the ravine walls.

The river corridor is mostly natural in character except for the road which follows the river for this entire segment. Other cultural modifications to the landscape are mostly products of ranching and recreation and include such things as 6 small ranch houses, barns, fences, spring developments, livestock, irrigation pumps, temporary firerings of a primitive nature, and a historic mill. These sights are in keeping with the river's recreational classification and are not significant enough to seriously affect the scenic values of the designated section. Scenery in this segment is considered to be an outstandingly remarkable value by both Congress and the BLM.

Vegetation

Riparian vegetation on this segment of the South Fork is dominated by grass/sedge communities with alder, water birch, willow, red-osier dogwood and ponderosa pine occupying significant portions. Additional plants common on this segment include clovers, rose, cheatgrass, clematis, Great Basin wildrye, bluegrass, horsetail, teasel and water hemlock.

Vegetative conditions and bank stability have improved significantly since the early 1980's, but further improvement and complete revegetation of exposed banks will require more time. Riparian conditions in 1980 were rated upper-poor, with a static or downward trend. Monitoring completed on the same transects in 1990 indicated conditions were high-fair, with an improving trend. In much of the riparian area young willow, alder, and water birch stands are becoming established, and existing stands are expanding their canopy coverage. Continued improvement is expected in the alder/birch/willow communities, further increasing the canopy cover and bank stability. Grass/sedge/rush communities also are improving in condition, providing increased ground cover, stabilizing banks and trapping sediments during high flows. The potential for continued improvement is good. One significant feature along this segment which needs to be maintained is the intact old-growth ponderosa pine community, with numerous trees of all age classes represented.

Two special status plants are known from the South Fork: *Astragalus diaphanous* var. *diurnus* and *Mimulus washingtonensis*. The entire known range of this *Astragalus* is within this river valley. *Thelypodium eucosmum* and *Rorippa columbiae* are suspected to occur.

The botanical values in this segment are considered to be outstandingly remarkable by the BLM.

Fish

The South Fork Subbasin currently produces approximately 7 percent of the total John Day steelhead as well as a substantial resident trout population. Annually, between March 15 and June 30, as many as 1,400 adult steelhead spawners migrate into the South Fork drainage where approximately 95 miles of spawning and rearing habitat exists. Juveniles rear in the subbasin

for two to three years before migrating. Resident trout populations generate 3,000 to 5,000 recreation days annually with a sport catch of up to 10,000 fish. Wild rainbows are supplemented each year with the stocking of legal-sized and fingerling rainbows. Historically, the subbasin never supported a Spring Chinook population.

Generally, fish production in the South Fork is maintained by good water quality and habitat diversity, particularly in the middle reaches. In the lower reaches of the subbasin, however, fish production declines when water temperature increases due to low flows and broad shallow channels. High water temperature is the most significant limiting factor to fish production in the South Fork. Steelhead runs are restricted to habitat below Izee Falls at river mile 27.5. Sunflower, Indian, Flat, Lewis, Corral, and Venator Creeks enter the South Fork above Izee Falls. These streams are important to the maintenance of wild trout populations in the subbasin.

Fish resources in this segment are considered to be an outstandingly remarkable value by the BLM.

Wildlife

The improved vegetative condition along this segment provides a greater diversity of wildlife habitats and species. This segment of the John Day probably has the highest diversity of wildlife species, due to the vegetative condition and diversity. Much of this segment is managed within the BLM/ODFW Murderer's Creek Cooperative Management Area. Species commonly found here from spring through fall are Lewis' woodpeckers, ashthroated flycatchers, Pacific tree frog, violet-green swallows, house wrens, mountain bluebirds, and lesser goldfinches. Yearlong residents are beaver, mule deer, elk, redbill hawks, Stellar jays, kingfishers, kestrels, water ouzels, magpies, blue grouse and California quail. Bald eagles utilize the area commonly in winter with several documented winter nocturnal roost sites recorded. Goshawks, California bighorn sheep, and Clark's nutcracker also commonly occupy the area during winter.

Congress has declared the wildlife values to be significant in this segment. BLM believes that the wildlife values here are outstandingly remarkable.

Cultural

A majority of the river corridor in segment 10 is public land. Cultural resource inventories have been conducted on a limited portion of these, mostly with negative results. However, landforms along the corridor suggest that there is a moderate to high probability of locating significant archaeological sites.

Historic use of this segment of the South Fork has been primarily for homesteading, farming, or ranching.

Prior to 1830, segment 10 was occupied by Northern Paiute groups (Ray et al. 1938). It was only after this period, due to the introduction of the horse, firearms, and disease, that the more northern Sahaptian speaking groups (specifically the Umatilla and Cayuse) were able to push south to utilize a few miles of the South Fork of the John Day River. Today, this area is within

the ceded lands of the Confederated Tribes of the Warm Springs. It is also within what the Confederated Tribes of the Umatilla and the Warm Springs consider a usual and accustomed joint use area. There are no known Native American religious sites or traditional use areas within this segment.

In the northern end of this segment there are only a few items of paleontological interest. These are interbasalt casts of tree roots and trunks. There is excellent potential for paleontological resources in the Mascall Formation, especially north of Deer Creek. This formation contains widespread and abundant vertebrate fossils and minor plant fossils. Marine invertebrates and fossiliferous outcrops there result in very significant paleontological values.

Recreation

The South Fork of the John Day River offers the visitor excellent opportunities for sightseeing, camping, fishing, swimming, picnicking, hiking and hunting. Other forms of dispersed recreation such as photography and wildlife watching also can be enjoyed by visitors. The South Fork road offers enjoyable mountain biking opportunities as well. At this time there are no recreational developments along the river, however, there is a total of 228 undeveloped sites that could be used for camping in segment 10, 104 of which are on public land. The river's rustic character provides the visitor with a feeling of isolation and remoteness despite its roaded accessibility. The Black Canyon Wilderness (USFS) provides hiking trails and backpacking opportunities. Cross-country hiking is available in the Aldrich Mountain WSA.

The rugged geologic formations of the canyon offer excellent sightseeing opportunities. The John Day Fossil Beds National Monument, and other areas in the vicinity, contain outstanding fossils of international significance. Collection of these fossils on public lands is not permitted, having protection under the Antiquities Act, but visitors can still enjoy the experience of hunting for and viewing these glimpses of the past.

Both Congress and the BLM have found the recreational values of this segment to be outstandingly remarkable.

Wilderness

The South Fork of the John Day contains portions of one designated wilderness area and one wilderness study area.

The Ochoco National Forest manages the Black Canyon Wilderness which has one of its trailheads on the South Fork of the John Day. This trailhead is located in the northern portion of the segment. The Aldrich Mountain Wilderness Study Area (9,395 acres) is located in the same general area on the opposite side of the river from the Black Canyon Wilderness. This area is managed by the BLM and has been studied for possible wilderness designation by Congress. The BLM recommendation to Congress was that it is not suitable for wilderness designation because of the poor boundary configuration (making management difficult) and incompatible uses on adjacent lands.

Table 42: Grazing Allotments in Segment 10

	Allotment	Category	BLM Acres	BLM AUMs	Grazing Season
Dayville to County Rd. #67	Smokey Creek #4124	I	2,213	307	7/1-11/30
	Murderers Creek #4020	M	17,315	2000	5/1-10/30
	Rockpile #4103	I	4,918	928	4/1-11/30
	Big Baldy #4052	I	11,312	600	4/1-5/15

*Resource Uses***Agriculture**

Agricultural use in this river segment is almost exclusively limited to livestock grazing. There are four BLM-administered grazing allotments in this segment (Table 42).

Photo points originally were established to monitor range conditions in the early 1980's. These photos, and other vegetative inventory data, show that grazing conditions along the river were poor in the early 1980's. Since that time, grazing management has been adjusted and vegetative conditions have improved to fair or good, and are continuing to improve. Grazing exclusion and restrictive grazing have met with great success in improving riparian vegetation on state-owned lands of the Lower South Fork and Murderers Creek.

Forestry

Forest lands within the proposed wild and scenic river boundaries are classified as commercial and generally suitable for forest harvest and management. However, certain areas on the river are withdrawn from consideration for harvest. Timber harvest in the remainder of the corridor is subject to restrictions that protect scenery and water quality.

Forest management on the east side of the river is guided by a plan which outlines forest practices for the next 10 years. There are no planned forest management practices for lands within the corridor west of the river. A timber sale is planned east of the river and upstream from Izee Falls. This operation is scheduled for 1996 or 1997. It would be a selective harvest done by helicopter. No trees would be removed within $\frac{1}{4}$ mile of the river.

Past timber management activities have had no long-term impacts to scenery, wildlife habitat or water quality. The timber east of the river and upstream from Izee Falls has been subjected to previous harvesting. Timber removal has been done by partial cutting (removal of 50% to 70% of the overstory) and commercial thinning (removal of marked trees over 10 inches diameter breast height to a 24 to 36 foot spacing).

Timber removal in this area has been light during the past 30 years, especially within mile of the river. Salvage harvests of under 5 million board feet (MMBF) each occurred in 1961, 1965, 1968 and 1971.

The most recent timber harvest in the river corridor occurred in 1984. This operation removed 2.2 MMBF in a location east of the river and upstream from Izee Falls. Most of this operation occurred well away from the river with the closest boundary of the sale within mile of the river. No new roads were built for this sale. The existing road network for this area was developed for timber harvests that occurred in 1956 (1.5 MMBF) and 1958 (3 MMBF).

Recreation

The primary recreation activities on this segment are scouting/hunting for deer and elk, fishing for resident trout, wildlife watching and camping.

This segment is not heavily used during hunting and fishing seasons, at least partially due to its rustic nature. There is no documented recreational boating use on the South Fork. There are an estimated 1500 visitor use days during the fall hunting season. Angling peaks in June with another surge in early fall. The South Fork from Izee Falls to Dayville had approximately 3,000 angler visitor use days in 1987. Personal contacts conducted in June thru September, 1991 on the South Fork revealed that most people (39%) spent the summer scouting for animals to hunt in the fall. Fishing reached 32% while swimming comprised another 19%. About 10% of the visitors were hunting at that time of year. About 10% of the people engaged in one of these activities were camping. From vehicle counts during this 4-month period, it is estimated that there were approximately 3,000 visitor use days. Designation as a Wild and Scenic River along with the establishment of the National Backcountry Byway probably will increase the numbers of visitors.

Personal contacts by the BLM revealed that 93% of the visitors to this segment were from Oregon. Washington accounted for 5%, while the rest (2%) were mostly from California and Idaho. Many of the Oregon visitors were from the Willamette Valley. An ODFW survey of anglers during November through March (1987-88) revealed a higher percentage of visitors from the John Day Basin and nearby, with only 3% from other states. International visitors were a small part of the out-of-state numbers.

Proposed Wild and Scenic Boundaries

The proposed Wild and Scenic boundaries for this river segment are found on maps 7g and h.

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue existing management. Public river access would not be improved or expanded. Existing public information signs would be maintained but no new public facilities would be provided.

Management Actions

Public Access

No additional public access would be developed or acquired.

Facilities

No visitor facilities would be provided.

Information and Education

Minimum public information would be provided as described in Management Common to All Alternatives.

Alternative B: More Use and Development

Alternative Described

This alternative would seek BLM acquisition of two key tracts of private land along the river, provide traffic control in riparian areas, widen and improve the surface of the South Fork Road, and provide large campgrounds at the sites where acquisition is proposed. Public information and education would be greatly expanded.

Management Actions

Public Access

A 10-acre private land tract at T. 16 S., R. 27 E., Section 29, SE_, NW_ would be acquired from a willing seller.

A 10-acre private land tract at T. 14 S., R 26 E., Section 12, SW_, SW_ and Section 13 NW_, NW_ would be acquired from a willing seller.

Traffic control barriers would be provided at the numerous dispersed recreation sites. Barriers would allow continued use while protecting riparian vegetation.

About 50 miles of the South Fork Road would be improved. Improvements would widen the road in some places and improve the surface to oiled gravel.

Facilities

A campground would be constructed, if the private property is acquired, at each of the two sites described in public access above. These campgrounds would involve about 20 acres, have about 20 overnight campsites each, and a picnic area, interpretive trail, and vault toilets.

Information and Education

An information and education plan would be developed for this river segment. The plan would focus on promoting several environmental and special designation themes. The plan would include a drive-by kiosk at each end of the segment, many vehicle turn outs along the road, and interpretive facilities at the proposed campgrounds.

Alternative C: Moderate Use and Development

Alternative Described

BLM would seek acquisition of two key tracts of private land along the river, provide traffic control in riparian areas, improve the surface of the South Fork Road, and provide minimal public facilities at the properties proposed for acquisition. Public information and education facilities would be limited to signs and kiosks along the road.

Management Actions

Public Access

About 50 miles of the South Fork road would be surfaced without widening the road. Acquisition of two private land tracts totalling about 20 acres described in Alternative B would be pursued.

Facilities

Minimum visitor facilities would be constructed to allow for dispersed camping on sites proposed for acquisition as described above.

Traffic control facilities would be installed as needed on all dispersed recreation sites along the river.

Information and Education

Interpretive facilities would be limited to the drive-by kiosks at each end of this segment.

*Alternative D: Low Use and Development***Alternative Described**

This alternative would limit use by closing 20 percent of existing dispersed camping sites on the river. No land acquisitions would be pursued and no facilities provided. Public information would be limited to signs along the South Fork Road.

Management Actions**Public Access**

No additional public access would be acquired.

Facilities

No visitor facilities would be provided. Twenty percent of the existing dispersed campsites (about 50 sites) would be closed to vehicle use.

Information and Education

Minimum visitor information would be provided as described in Management Common to All Alternatives.

Alternative E: Preferred Alternative

Alternative C is the preferred alternative.

Environmental Consequences*Air*

Use of the South Fork Road will continue to increase, regardless of the alternative selected. This means that temporary dust will continue to increase from vehicles using this graveled road.

Soil

Construction of two campgrounds on about 20 acres and 50 miles of road improvements as proposed in Alternative B would contribute to temporary site-specific erosion at project sites. Improvement of 10 acres for two camping areas and 50 miles of road improvements in Alternative C would also contribute, though somewhat less than Alternative B, to temporary erosion.

Alternatives A and D, which provide for no traffic control, would cause soils in the riparian zone to continue to deteriorate at vehicle access points. These sites would be allowed to stabilize if traffic control barriers are installed as proposed in Alternatives B and C.

Closing about 50 campsites to vehicles, as proposed in Alternative D, would reduce recreation-caused erosion on about 15 acres of land.

Water

Campground construction on 20 acres and 50 miles of road improvements proposed in Alternative B would contribute slight temporary silt to the river at construction sites (see soils). Alternative C, with 10 acres of improved camping areas and 50 miles of road improvement would contribute temporary silt as well, although less than Alternative B.

Alternatives B and C, which propose traffic control barriers in the riparian zone, would help stabilize soils and decrease associated siltation. Alternative A, which allows the present situation to continue, would contribute the most siltation to the river as popular sites become increasingly void of vegetation.

Alternative D would close about 50 campsites on about 15 acres to vehicles, which would further stabilize soils and decrease siltation.

Vegetation

Riparian vegetation vigor would continue to decline as vehicles remained unrestricted as proposed in Alternative A.

Increased use resulting from improved facilities on 20 acres and 50 miles of improved access proposed in Alternative B and 10 acres of improved facilities in Alternative C would reduce riparian vigor at popular recreation sites. However, vegetation vigor would increase at recreation sites accessible by vehicle due to installation of traffic control barriers proposed in Alternatives B and C.

Riparian vegetation would be damaged least by Alternative D.

Increased public use resulting from Alternatives B and C would increase recreational pressure throughout the canyon. Known habitat of *Astragalus diaphanus* var. *diurnus* and *Mimulus washingtonensis* could be impacted through increased hiking and off highway vehicle use. *Thelypodium eucosmum*, if present, could also be impacted. Habitat of these species would benefit under Alternative D with less public use. *Rorippa columbiae*, if present, would occur along the riparian area and could be impacted by increased visitor use under Alternatives B and C, but restrictions on use along the riparian area would be a benefit.

Fish

Fish mortality would continue to rise in proportion to the growth in fishing pressure.

Improved access on 50 miles of road and 20 or 10 acres of facilities proposed in Alternatives B and C, respectively, would increase fishing pressure which would increase fish mortality and severely impact trout populations. An improved road would increase traffic volume and increase the chances for accidents and hazardous material spills into the river.

Alternative D probably would reduce fishing pressure by a small amount.

Wildlife

Increased use resulting from 50 miles of improved access and 20 acres of facilities proposed in Alternative B or 10 acres in Alternative C would displace some wildlife species from affected sites.

Wildlife would be the least impacted by Alternative D which proposes no new facilities or access and actually closes about 50 sites on about 15 acres.

Scenery

Unrestricted vehicle use of the riparian zone proposed in Alternative A would expand the adverse visual impacts at popular river access points.

Facilities constructed on 20 acres and 50 miles of road improvements proposed in Alternative B would add man-made features and change the natural-appearing character of the landscape. Traffic control barriers would significantly reduce visual impacts caused by uncontrolled vehicle use of the riparian zone, but would create their own visual impacts.

Fewer interpretive and informational signs along the road in Alternatives A, C and D would cause less visual impact to scenery. However, interpretive information in Alternatives B and C could help to educate visitors about no-trace camping, ultimately reducing visual impacts such as litter.

Alternative D probably would result in a slight improvement of the scenery due to less overnight use and about 50 sites closed to vehicles.

Recreation Use

Recreation use will continue to increase at existing rates regardless of alternative selected. Use of this river segment is increasing due to the area's increasing popularity. Improving facilities on 20 acres and improving 50 miles of road access as described in Alternative B would accelerate the rate of increase.

Because fewer improvements would be proposed in Alternative C, the rate of increase in use would be slightly slower.

Closing 50 campsites to vehicles as proposed in Alternative D would result in the minimum of recreation use increase.

Recreation Experience

Continued increased use, which will occur regardless of the Alternative selected, will change the recreational setting from one where visitors encounter few people to one where many people are encountered. Competition for limited campsites will increase and many will be forced to camp in less desirable locations, or move to another area.

Primary uses include fishing and camping in a primitive setting. Increases in use in close proximity to the road are creating a setting where vehicles, facilities, and people are frequently encountered.

Existing activities will continue, with an increase in use by non-local visitors in recreational vehicles in the summer months.

The recreation experience of many visitors would be enhanced by the proposed interpretive and informational signs proposed in Alternatives B and C.

The recreation experience for Alternative C would differ from that in Alternative B in that no developed campgrounds would be provided and fewer interpretive and informational signs would be provided along the road.

Alternative D probably would result in a slight reduction in the rate of increase in recreation use, thereby enhancing the recreation experience.

Social and Economic Conditions

The few residents and landowners along this river segment will experience a significant increase in visitor contacts and trespass regardless of the alternative selected. Alternative D could slow this trend by the reduction in number of campsites accessible by vehicle by about 50.

The communities of Dayville, and to a lesser degree Paulina, will see an increased demand for a wide variety of tourist goods and services.

Public Services

The rapid increase in use with any of the Alternatives would increase the need for emergency services and law enforcement. The Dayville community is not able to provide adequate public services for the anticipated increase in use.

Segment 11: County Road 67 to Headwaters**Affected Environment***Overview***Location and General Description**

This river segment is about 25 miles long with 17 miles designated as Wild and Scenic River. The wild and scenic river designation and the National Backcountry Byway continue upstream from segment 10 into this segment and end at the Malheur National Forest boundary (see map 7h). The BLM administers about 1/2 mile of river frontage in three widely-separated parcels in this segment.

This is a rural, agricultural area where the Post-Paulina Road (County Road 67) follows the river upstream for about nine miles. At that point, a good gravel road follows the river for another eight miles to the national forest boundary and continues into the forest. Approximately seven miles of the South Fork headwaters flow through land managed by the USFS.

Some private pastures along the river are used as winter feed lots for livestock. These areas are devoid of vegetation and are obvious sources of water pollution.

River Characteristics

River characteristics for the entire South Fork of the John Day River, which including this segment, are described in the discussion for segment 10. This segment differs from segment 10 in that it is not contained in a narrow canyon and the stream character is normally slow, wide and shallow, with little riparian vegetation present from the national forest boundary to County Road 67.

Land Ownership and Classification

This river segment is about 25 miles in length. The first 17 miles between County Road 67 and the Malheur National Forest boundary are designated as a National Wild and Scenic River, although the land is primarily privately owned. The BLM administers a total of _ mile of river frontage located in three widely scattered parcels along the paved highway. The balance of this segment (about 7 miles) is within the Malheur National Forest. The South Fork John Day River National Backcountry Byway follows the river from segment 10 to the Malheur National Forest boundary.

The Oregon State Scenic Waterway designation ends at segment 10 and does not include lands in this segment.

From County Road 67 to the national forest boundary the lands adjoining the river are planned and zoned by Grant County for use as rangeland and forest management. The zone designation for rangeland is "Multiple Use Range" (MUR 40(160)). The MUR 40 (160) zone starts at County

MAP 7h

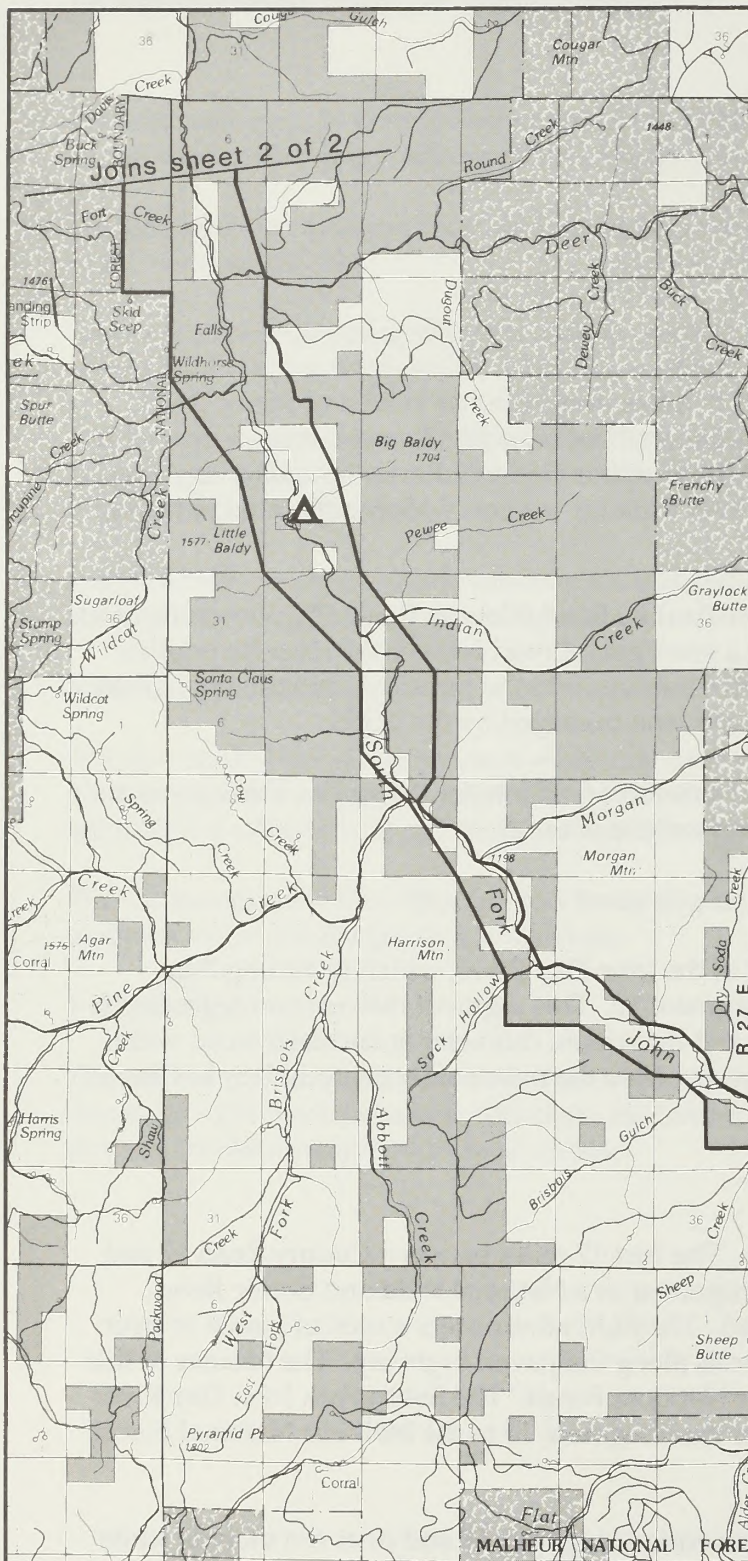
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

SOUTH FORK JOHN DAY WILD AND SCENIC RIVER






Prineville District
1993

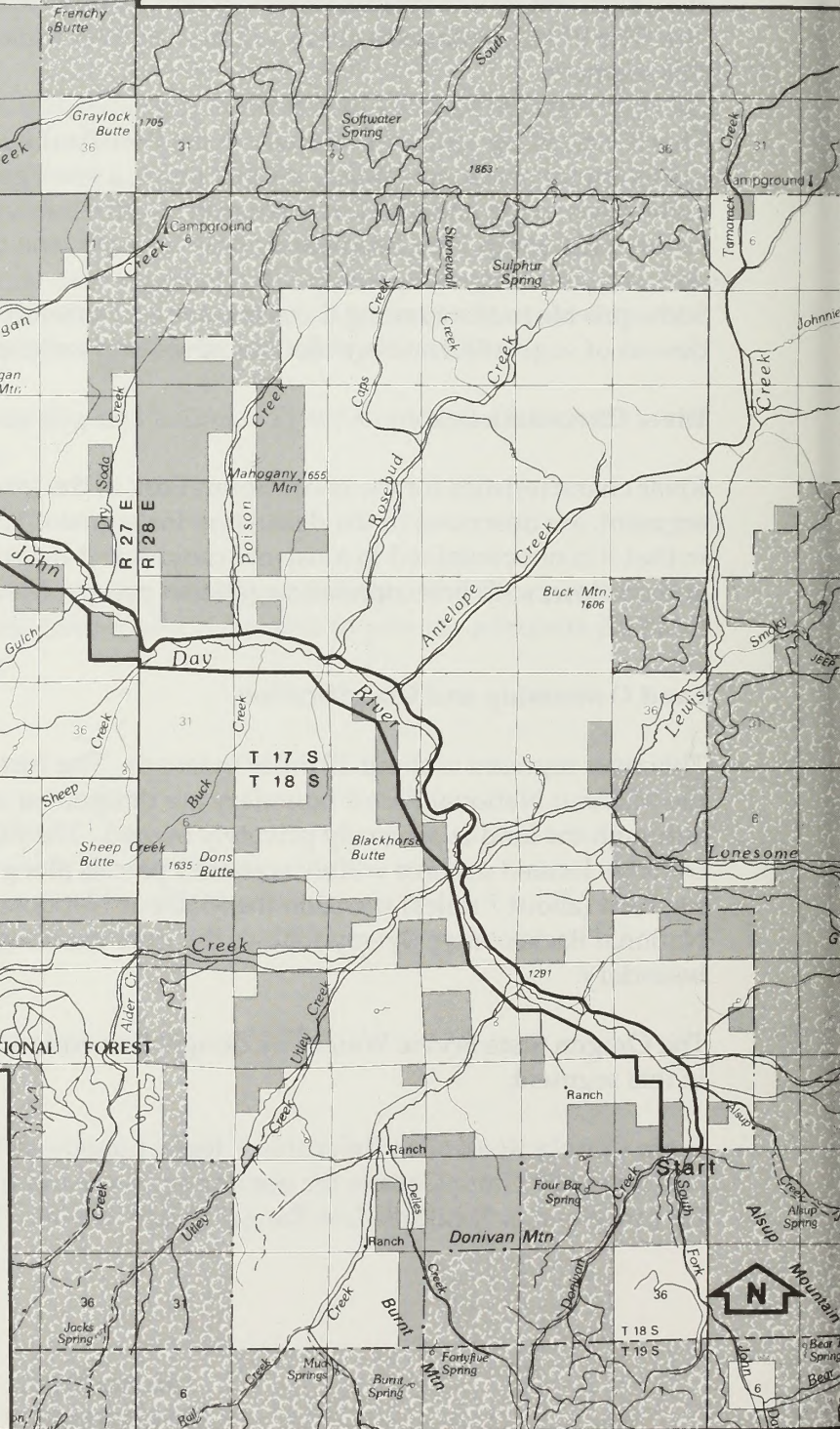
1 of 2

1 0 1 2 3 Miles



LEGEND

-  Public Lands (Admin by BLM)
-  USFS Lands
-  Private Lands
-  Proposed National Wild and Scenic River Boundary
-  Proposed Recreation Site



Road 67 and ends upstream approximately where Morgan Creek enters the South Fork (RM 37). Above RM 37 to the national forest, Grant County has planned and zoned the lands adjoining the river for forest management. The zone designation is Primary Forest (F-80(160)). This zone is applied to the highest and best-producing forest lands. The F-80(160) zone is intended to protect forest lands for commercial growing and harvesting of timber and to conserve and protect watersheds, wildlife habitat and scenic and recreational values. In this zone the lot size minimum for new farm or forest parcels is 80 acres and the total number of principal and secondary homesites cannot exceed an overall density of one dwelling for every 160 acres.

Public River Access

The river is adjacent to paved County Road #67 for approximately 10 miles. The county road changes to gravel and continues upstream along the South Fork to the USFS boundary, a distance of 7 miles. These 17 miles of county road travel mostly through private ranch land and access to the river is limited. At the USFS boundary the gravel road becomes USFS Road #47 for approximately 8 miles. It continues along the South Fork to its headwaters, mostly on USFS land, providing good public access to the river.

Resource Values

Wild and Scenic River Designation

See discussion in segment 10.

Scenery

Most of this river segment is in a rural setting of tree-covered hillsides and a wide valley bottom containing occasional ranching structures and livestock. Some lands along both sides of the river are segregated into pastures by wire fences. These pastures have been used for many years for containing and feeding livestock year-round.

Vegetation

This portion of the South Fork flows primarily through agricultural lands, and as a result most of the natural riparian vegetation is gone or has been replaced by pasture grasses. Much of this segment has been channelized by mechanical means, and in places the river has cut down into the floodplains, creating channels. In a few areas willow stands have survived, but only a little natural vegetation occupies the banks.

Two special status plants are known from the South Fork: *Astragalus diaphanous* var. *diurnus* and *Mimulus washingtonensis*. The entire known range of this *Astragalus* is within this river valley. *Thelypodium eucosmum* and *Rorippa columbiae* are suspected to occur.

Although the RA for the entire South Fork found that vegetation is an outstandingly remarkable value, the riparian vegetation in segment 11 is in very poor condition.

Fish

See segment 10 for a discussion of fish in the entire South Fork of the John Day River.

Wildlife

Wildlife use of this segment is limited, due to a lack of vegetative diversity and structure on the portion outside of the national forest. Species commonly observed within this segment are mule deer, redtail hawks, Townsends ground squirrels, kestrels, robins, house wrens, swallows, mallards, and beaver.

Cultural

The only known cultural resource inventory for this segment was done in conjunction with the burying of a telephone cable along the highway. No cultural sites or artifacts were found. Landforms exhibited on public lands within the corridor suggest moderate potential for discovering significant cultural resources.

Historic use of this segment of the South Fork has been primarily for homesteading, farming, or ranching. A lumber mill was established near Izee in 1946 and operated until 1967. The mill was dismantled in 1969.

Prehistorically this segment was traditionally occupied by the Northern Paiute. Today, however, this area is mostly within the ceded lands of the Confederated Tribes of the Warm Springs. There are no known Native American religious sites or traditional use areas within this segment.

Exposures of considerable paleontological interest are located in this segment. South of Izee the South Fork has cut through a Jurassic sequence of marine volcanoclastics. This sequence of the Suplee, Nicely, Hyde, Snowshoe, Trowbridge and Lonesome Formations contains ammonites, bivalves and rhyconellid brachiopods. Some of the ammonites are quite significant, but the area has been "hit" by amateur collectors.

Recreation

Public recreation opportunities are limited to driving for pleasure on the National Backcountry Byway portion of this segment. The lack of public land and poor water and riparian conditions preclude traditional activities of hiking, fishing, and picnicking. Bicycling could be accommodated on the road. There is a total of eleven undeveloped campsites on this segment, only one of which is on public land. Public outdoor recreation opportunities increase on the national forest portion of this segment. This area is not designated as wild and scenic but the land along the river is open to public use. Water and riparian conditions in the national forest are good, providing better wildlife habitat and a pleasant outdoor recreation setting.

Table 43: Grazing Allotments in Segment 11

	Allotment	Category	BLM Acres	BLM AUMs	Grazing Season
County Road 67 to Forest	Big Flats #4186	1	3,637	927	4/15-11/30
	Soda Creek #4044	1	2,023	405	4/01-11/30
	Sheep Creek Butte #4067	C	2,876	292	4/01-11/30

Oregon State Parks and Recreation Staff have found, through their Resource Analysis process, that the same values rated as ORVs by the BLM (in the right column) also have Scenic Waterway special attribute status.

Wilderness

There are no WSAs or designated wilderness areas in this segment.

Resource Uses

Agriculture

The wild and scenic portion of this segment below the national forest is used for livestock grazing. The lands on the river here are almost totally privately owned. They provide an important location for local ranches to hold and feed their livestock over the winter months. See Table 43 for information on the grazing allotments in this segment.

Recreation

Recreation activity in the wild and scenic portion of this segment is limited to driving or bicycling for pleasure, although this is not a destination drive for most people.

The portion of this segment in the national forest receives more diverse recreation use, including hunting, hiking and general day use.

Proposed Wild and Scenic Boundaries

The proposed wild and scenic boundaries for this river segment are found on maps 7g and h.

Management Alternatives

Alternative A: Existing Use and Development

Alternative Described

This alternative would continue existing management. BLM has minimal public land on this segment and therefore few opportunities to influence use. No facilities are provided and public

river access is very limited. A public highway and gravel road are located next to or near this entire segment.

Management Actions

Public Access

No additional public lands or access would be acquired.

Facilities

No visitor facilities would be provided.

Information and Education

Minimum visitor information would be provided for this river segment as described in Management Common to All Alternatives.

Alternative B: More Use and Development

Alternative Described

No additional public river access or lands would be acquired. Public information and education signs would be placed along the roads following this segment. A pull-out interpretive kiosk would be installed on a BLM tract along the highway.

b) MANAGEMENT ACTIONS

Public Access

No additional public access would be acquired.

Facilities

No visitor facilities would be provided.

Information and Education

Highway and road signs would be installed at each end of this segment to identify the Wild and Scenic River and Backcountry Byway designations.

A pull-out interpretive kiosk would be installed at the BLM tract located at T. 17 S., R 27 E., Section 23, NW1/4.

Alternative C: Moderate Use and Development

Alternative Described

This Alternative is the same as Alternative B, except the kiosks would not be installed.

Alternative D: Low Use and Development

Alternative Described

This Alternative is the same as Alternative A.

Alternative E: Preferred Alternative

Alternative C is the BLM preferred alternative.

Environmental Consequences

Scenery

Alternatives A and D would maintain the present rural setting by not placing additional man-made objects. Highway and road signs and the interpretive kiosk proposed in Alternatives B and C would be visible from the road and from the river.

Recreational Experience

People driving along this river segment would continue to experience driving in a rural setting with no interpretive facilities as proposed in Alternatives A and D.

Installation of road signs and a kiosk as proposed in Alternatives B and C would enhance the experience and be of educational value for most visitors to this river segment.

G. Cumulative Environmental Consequences

Air

Alternative A

Dust from the 50 mile South Fork Road would continue to increase in segment 10 as use of that road continues to increase.

Alternative B

Proposed facility construction on a total of 90 acres in segments 1, 3 and 10 would temporarily increase dust during construction at those sites.

Use of six proposed new public vehicle access routes totalling about 25 miles in segment 2 would increase visible dust at those locations during the public use periods from March through November. Increased dust also would result from proposed improved vehicle access on 80 miles of road in segments 1, 3 and 10.

Alternative C

Proposed facility construction on about 50 acres in segment 3 would temporarily increase dust during construction at those sites. Increased dust also would result from public use of one road totalling 6 miles in segment 2, one 15 miles road in segment 3 and 6 miles of the Butte Creek Road, which is the boundary between these two river segments. Increased public use of 68 miles of improved existing roads would temporarily increase dust at those locations in segments 1, 3 and 10.

Alternative D

No impacts

Preferred Alternative

Slightly increased dust would be associated with increased use of Hay Creek road and Juniper Island road. Temporary site-specific dust would be associated with about 50 acres of construction of recreation facilities at Burnt Ranch, Priest Hole and Twickenham.

Soil

Alternative A

Unlimited boating would cause increasing sedimentation to the river from popular recreation sites in segments 1, 2, 3, 4, 6 and 7.

Alternative B

Proposed facility construction on about 85 acres and road improvements (about 52 miles) in segments 1, 3 and 10 would cause temporary site-specific erosion.

Alternative C

Slight short-term erosion would occur in association with the proposed 2 mile hiking trail construction at Hay Creek in segment 1. Eroding soils in the riparian zone of segment 10 would stabilize if traffic control barriers are installed at popular recreation sites.

Alternative D

Site-specific erosion of 50 recreation sites totalling about 15 acres would be reduced if these sites were closed to motorized use in segment 10.

Preferred Alternative

Slight short-term erosion would occur in association with the proposed 2 mile trail construction at Hay Creek in segment 1. Soil erosion occurring at popular recreation sites in segment 10 would stabilize with installation of traffic control barriers.

Water

Alternative A

Sanitation problems associated with increased and unrestricted public use eventually would contribute pollutants to the water in all segments.

Alternative B

Slight increases in sediment would result from a total of about 52 miles of additional public vehicle access and road improvements in segments 1 and 2.

Facility construction on 90 acres total would cause slight site specific increases in siltation to the river in segments 1, 2, 3 and 10.

Sanitation problems associated with increased public use could contribute pollutants to the river. The amount of pollutants however, would be very slight and not likely measurable, especially at higher water levels.

Alternative C

Very slight site-specific sedimentation would occur at new river access routes on 12 miles in segment 2 and at proposed facility construction sites on about 50 acres in segment 3.

Siltation would stabilize or decrease with the installation of traffic control barriers proposed at popular recreation sites.

Alternative D

Existing and future sedimentation occurring from exposed soils at popular recreation sites would slightly reduce with less public use.

Preferred Alternative

Slight temporary increases in sedimentation would occur at proposed construction sites on 91 acres. Increased use at McDonalds Crossing, Hay Creek, and other popular recreation sites would slightly increase sedimentation at these sites. However, sedimentation would be reduced or stabilized at popular sites in segment 10 with installation of traffic control barriers.

Vegetation

Alternative A

Unlimited boating and unrestricted camping at recreation sites eventually would cause a decline in riparian vegetation at these sites.

Lack of vehicle control barriers would accelerate vegetative damage on sites accessible by vehicle.

Alternative B

Riparian vegetation vigor would be reduced at popular recreation sites in all segments with increased public use. Proposed traffic control barriers in segment 6 and 10 would protect some vegetation from damage by vehicles.

Alternative C

Riparian vegetation vigor would be reduced at popular recreation sites.

Fewer sites would be accessible by vehicle in segment 2 than proposed in Alternative A.

Proposed vehicle control barriers in segments 6 and 10 would protect vegetation at specific sites from vehicle damage.

Alternative D

Riparian vegetation vigor would improve slightly at popular riverside recreation sites if boating use occurs in lower numbers and vehicle barriers are installed.

Preferred Alternative

Vegetation would be reduced in the immediate vicinity of proposed recreation sites in segments 1, 3 and 10. However, installation of traffic control barriers in segments 6 and 10 would reduce vehicle damage to vegetation in popular recreation sites.

Social and Economic Consequences

The recreation resources of the John Day Basin are of incalculable value. Because of the outstanding scenery, boating, fishing and hunting opportunities, the John Day River and its tributaries are attracting more and more people who are "escaping" the cities and the congestion on other rivers. These recreational activities have a very positive effect on the businesses which provide goods and services to tourists. The gain in tourism is reflected in the shift in the labor force in the John Day Basin, where, between 1988 and 1990, the number of people employed in services rose almost seven percent while those employed in agriculture dropped two percent. Grant County has recognized the importance of tourism as the basis for their future economy.

Consequences by Alternative

Alternative A

In this alternative, the only restrictions on unlimited growth in recreation uses would be the closure and rehabilitation of undesignated roads, parking and camping areas and the prohibition of motor-boating when the flow drops below 1000 cfs. Recreation uses would be expected

to continue increasing, and this would be of benefit to local businesses offering goods and services. Additional seasonal employment opportunities also would be expected to increase.

Alternative B

Same as alternative A, except that there would be an eventual cap on the total number of boaters permitted on some river segments on any one day. Recreational use could expand on mid-week days due to the limitations on week-ends and holidays, in which case the positive economic effects would be increased.

Alternative C

Same as alternative B.

Alternative D

Reduction of the present level of recreation uses would be expected to have detrimental impacts on local merchants and others who attribute some of their income to recreation on the river. However, because week-end and holiday boaters would be limited in number, boating use during the week would be expected to increase. This shift in use could result in a long-term, stabilizing effect on the local economy.

Alternative E

The preferred alternative is aimed at allowing controlled growth in recreation use, at the same time rehabilitating and protecting the natural resources which make the John Day Basin such a wonderful place to recreate. A long-term positive impact on the economy would be expected with the adoption of this Alternative.

Irreversible or Irretrievable Commitment of Resources

Areas committed to facilities, roads and trails constitute an irretrievable loss of vegetation and associated wildlife habitat. The commitment of land to major roads and facilities can be considered to be an irreversible effect. Some management actions would cause adverse environmental consequences that cannot be avoided.

Among them are:

- a. The displacement of soil in localized areas through construction of roads, trails and recreation facilities.
- b. The temporary minor degradation of air quality by dust through construction and operation of unsurfaced roads and by smoke through prescribed burning of vegetation.
- c. The minor degradation of visual quality in localized areas through construction or improvement of roads, trails and recreation facilities.
- d. The destruction or temporary modification of areas suitable for undeveloped recreation through construction of roads, trails and other facilities and changing natural vegetation.

The environmental and economic benefits of the proposed project are significant. The project will provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment. The project will also provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment.

Alternative B is the preferred alternative because it provides the most significant environmental and economic benefits. Alternative B will provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment. Alternative B will also provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment.

Alternative C is the preferred alternative because it provides the most significant environmental and economic benefits. Alternative C will provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment. Alternative C will also provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment.

Alternative D is the preferred alternative because it provides the most significant environmental and economic benefits. Alternative D will provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment. Alternative D will also provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment.

Alternative E is the preferred alternative because it provides the most significant environmental and economic benefits. Alternative E will provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment. Alternative E will also provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment.

The project will provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment. The project will also provide a permanent improvement in the water quality of the river, which will result in a permanent improvement in the health of the river and its surrounding environment.

V. Oregon Scenic Waterways Program and its Application to the John Day River

Background

The Oregon Scenic Waterways Act was established by a ballot initiative in 1970. The original Oregon Scenic Waterways System created by the Act included 496 free-flowing miles of six rivers. Some 147 river miles of the original scenic waterway system included the lower John Day River.

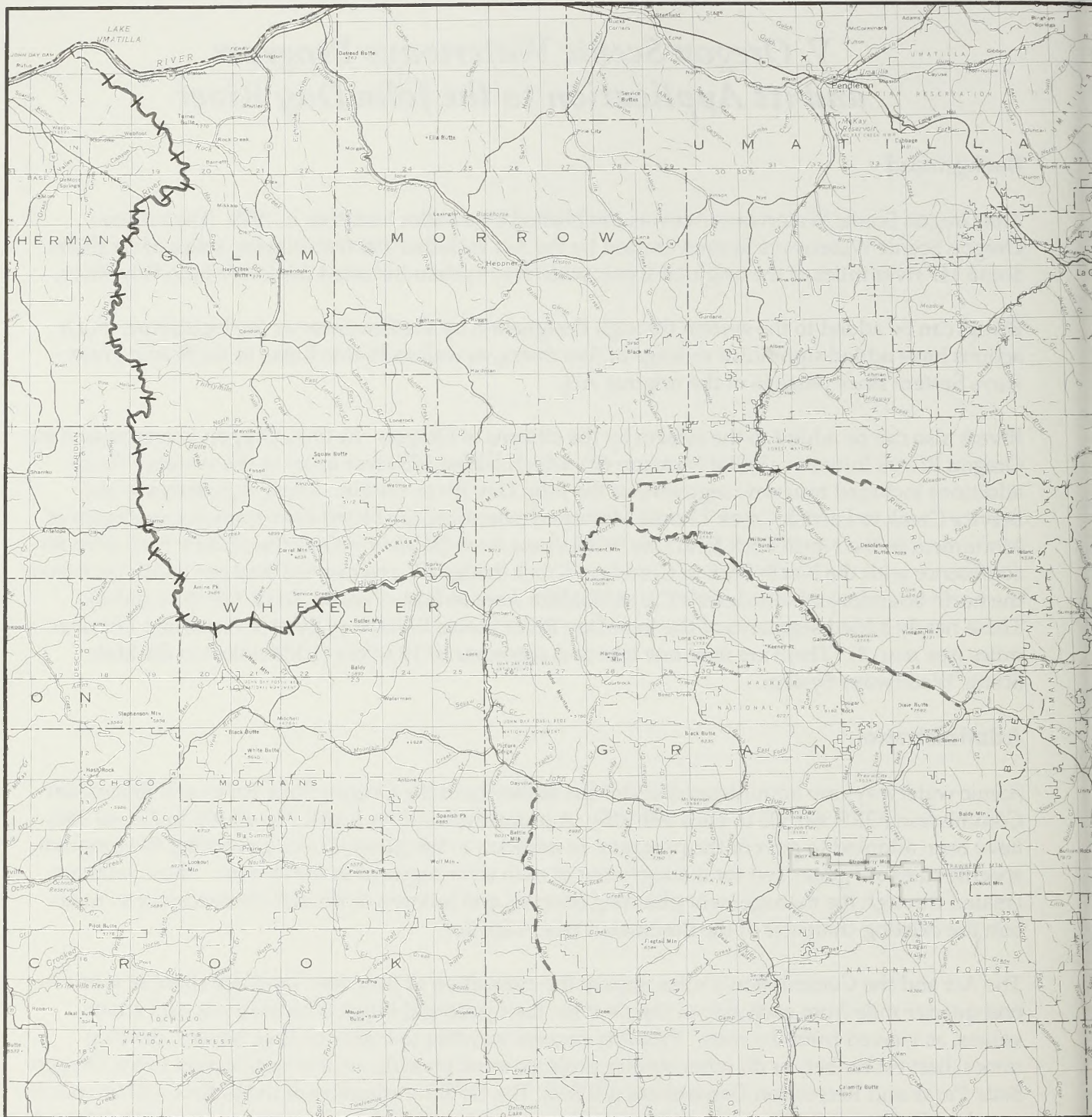
Rivers can be added to the system through designation by the Governor or the legislature. Such actions have added significant mileage of five rivers, as well as Waldo Lake, to the Scenic Waterways System since passage of the original Act.

Rivers also can be added to the system by the citizens of Oregon. In 1988, Oregon voters passed the Oregon Rivers Initiative (Ballot Measure #7), which added 573 river miles to the system. These additions included four new segments of the John Day River system. These segments are: the Service Creek to Parrish Creek 13 mile Mainstem extension; the North Fork from just upstream of Monument to the North Fork John Day Wilderness Area (56 river miles); the Middle Fork from its confluence with the North Fork to Crawford Creek Bridge (71 river miles); and the South Fork from the north boundary of Murderer's Creek Wildlife Area to Post- Paulina Road (30 river miles). These newly added segments of the John Day River Scenic Waterway System constitute 170 river miles (see map 8). There are now one lake and segments of 19 rivers (1,148 miles) in the State Scenic Waterways System.

Administration

Scenic waterways are administered under the authority of the Oregon State Parks and Recreation Commission (ORS 390.805 to ORS 390-925). Administrative rules (OAR 736-40-005 to 736-40-040) have been adopted to govern the program. In addition to the general rules governing the program, specific rules are generated for management of each river segment in the system. These rules are created through the management planning process, and tailored to the actions necessary to maintain the existing character of the designated river corridor.

The Act and the Commission's rules require the evaluation of proposed land use changes within one-quarter mile from each side of the river for their potential impacts on aesthetic and scenic values, as viewed from the river. Property owners wanting to build roads or houses, develop mines, harvest timber, or do other similar projects, must provide written notification to the Oregon State Parks and Recreation Department (OPRD). The OPRD evaluation of the project will be coordinated with other natural resource agencies (federal and state) having regulatory responsibility and with the local jurisdiction. The OPRD relies on its river classification and administrative rules for each segment of the scenic waterway to determine whether the proposed project is incompatible or inconsistent with the designated classification. The OPRD will work with the landowner to reach a mutually satisfactory resolution of any conflicts. Where such a resolution cannot be reached, the Commission must decide within one year of the original notification whether to pay the property owner for the land or the development rights. If the Commission does not decide within one year





MAP 8

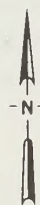
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

JOHN DAY RIVER STATE SCENIC WATERWAY

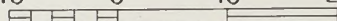
Prineville District
1993

LEGEND

-  1970 Designation
-  1988 Designation



10 0 10 20 Miles



to acquire the land or development rights, then the landowner may proceed in accordance with the original development proposal.

Other local and state agencies must comply with the scenic waterway law and rules. OPRD also works closely with federal agencies to assure their actions are compatible with scenic waterway law, rule, and resource management recommendations.

The Management Planning Process

The goal of the scenic waterway management planning process is to develop a comprehensive and workable management plan which will protect or enhance the special attributes of the designated river corridor. Primary emphasis is the protection of aesthetic, scenic, fish and wildlife, scientific and recreational features. The intent of the program is to maintain or, when possible, enhance the scenic waterway without adversely affecting existing land uses. The mechanisms for protection and enhancement include:

River Classification - Within the management plan, scenic waterways are classified into one or more of six possible classifications, according to the character of the landscape and the amount and type of development.

Administrative Rules - Once the classifications are set, specific guidelines for new development are established as rules.

Other Management Recommendations - These are suggestions for actions to protect or enhance corridor values, to be implemented by the State Parks and Recreation Department, other state agencies, organizations or persons.

Scenic Waterway Classification

Under Oregon law (ORS 390.845 - Functions of the department; use of adjacent lands), the scenic waterway program is administered by the State Parks and Recreation Commission, and staffed by the Oregon State Parks and Recreation Department. The Parks Department is required to protect the aesthetic, scenic, fish and wildlife, scientific and recreation features based on special attributes of each river area. The Parks Department strives to protect special attributes of the river while recognizing existing land uses and management practices on adjacent lands.

In order to define and achieve management goals, the river is classified into one or more of six possible classifications, according to the present level of land development or landscape alterations. Once the classifications are set, appropriate guidelines for new development or landscape alterations are established as rules. The aim of the program is to maintain the existing scenic condition of the river.

The following are existing land use and land alteration conditions usually associated with each of the six river classifications; and how each kind of classification should be administered (managed) in scenic waterways:

1. *Natural River Areas* are generally inaccessible except by trail or river, with primitive or minimally developed shorelands. Preservation and enhancement of the primitive character of these areas is the goal of this and the next two classifications.
2. *Accessible Natural River Areas* are relatively primitive, undeveloped areas with access by railroad or lightly traveled road.
3. *Natural Scenic View Areas* are designated where one riverbank is inaccessible, undeveloped or primitive in character while the opposite bank is accessible and developed.
4. *Scenic River Areas* may be accessible by roads, but are largely undeveloped and primitive except for agriculture and grazing. River segments considered "Scenic" are managed to maintain or enhance their high scenic quality, recreation value, fishery and wildlife habitat. The intent is to preserve their largely undeveloped character while allowing continuing agricultural uses.
5. *Recreational River Areas* are readily accessible by road or railroad, with some agricultural, commercial and/or residential development along the banks; the river may have undergone some impoundment or diversion in the past. River segments considered "Recreational" are managed to allow continuance of compatible river-oriented public outdoor recreation opportunities, to the extent that these do not substantially impair the natural beauty of the scenic waterway or diminish its aesthetic, fish and wildlife, scientific and recreational values.
6. *River Community Areas* are river segments where the density (residential tract or platted subdivision) of existing structures or other developments precludes application of a more restrictive classification. River segments considered "Community Areas" are managed to allow development that is compatible with county zoning and blends into the natural character of the surrounding landscape. This also means protecting riparian vegetation, and encouraging activities that enhance the landscape.

The rules established for each river classification generally allow some new construction and continued use of existing structures and improvements. Though some improvements require notification, review and approval, many others do not.

For example, notification and approval is not generally needed for construction of new fences; maintenance of farm buildings, fences or outbuildings; laying of irrigation lines; crop rotation; removal of danger trees; construction of grain storage facilities under certain conditions; maintenance of existing residences and outbuildings; minor residential remodeling; construction of garages adjacent to existing homes; certain changes in homesite landscaping; maintenance of roads and bridges; and firewood cutting for personal use.

Mining, road building, construction of most new structures, placement of mobile homes, land clearing and timber harvest are examples of activities requiring approval. River classifications and

the associated rules or guidelines determine how the natural and scenic beauty of the river will be maintained.

Proposed Scenic Waterway Program for the John Day River, Mainstem

The Oregon State Parks and Recreation Department proposes to revise the extent of the Natural River Area Classification along the lower John Day River and apply more definitive land management rules to the following three lower river segments from Tumwater Falls to Service Creek.

Proposed Classification Revisions for Existing Segments

The following two river segments are classified as:

Scenic River Areas

1. From Tumwater Falls at approximately Rivermile 10 to 3 1/2 miles below Cottonwood Bridge crossing at Rivermile 43, the John Day River is classified *Scenic River Area*. This segment of the Lower John Day is approximately 33 miles long, mainly fronted by private lands. The management goal is to allow continuation of existing farm, rural residential and recreation uses while protecting the scenic character of the area.
2. From Rivermile 95 at the southeast corner of Section 35 of Township 5 South, Range 18 East to the confluence of Service Creek with the John Day River, the classification is *Scenic River Area*. This segment of the Lower John Day is approximately 62 miles long, mainly fronted by private lands.

The management goal is to allow continuation of existing farm, rural residential and recreation uses while protecting the scenic character of the area.

Proposed Land Management Rule Revision for Above Scenic Areas

These Scenic River Areas shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040 (1)(b)(B). In addition to these standards, all new development in resource zones (i.e. farm related dwellings) shall comply with Gilliam County, Sherman County, Wasco County, Jefferson County or Wheeler County land use regulations.

New structures and associated improvements (except as provided under OAR 736-40-030 (5)) shall be moderately screened with native vegetation and/or existing topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if native vegetation can be established to provide moderate screening of the proposed structure or improvement within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to moderately obscure (at least 50%) the viewed structure or improvement, or allow a moderately filtered view (at least 50% filtering) of the proposed structure or improvement.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if native vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the altered improvement site.

New roads may be permitted only when fully screened from the river by topography and/or existing vegetation.

Existing roads may be upgraded when those roads are moderately screened from view from the river by topography. No side cast visible from the river is permitted. Excess material shall be hauled to locations out of sight from the river. If inadequate screening exists, the road may be permitted if native vegetation can be established to provide moderate screening of the road within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to allow a moderately filtered view (at least 50% filtering) of the road.

Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance should be kept to a minimum.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the appropriate County Land Use and Development Ordinances, the above Oregon Administrative Rules shall apply.

Proposed Classification Revision for Existing Segment

Rivermile 43, 3 1/2 miles downstream from Cottonwood Bridge Crossing to Rivermile 95 (at the southeast corner of Section 36 of Township 5 South, Range 18 East) is classified as:

Natural River Area

This segment of the Lower John Day River is inaccessible by road and is remotely located between steep-walled canyons where very little sign of any structures or human settlement exists. This segment is 51 1/2 miles long and is mainly fronted by public land. The management goal is to preserve and protect the primitive undeveloped character of the area.

Proposed Land Management Rule Revision for Above Natural River Area

This Natural River Area shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040(1)(a)(C). In addition to these standards, all new development in resource

zones (i.e. farm-related dwellings) shall comply with Gilliam County or Sherman County land use regulations.

New structures and associated improvements shall be totally obscured from view from the river by topography except as provided under OAR 736-40-030 (5) and except those minimal facilities needed for public outdoor recreation or resource protection.

New mining operations, except placer mining and similar improvements shall be permitted only when they are substantially screened from the river by topography.

New roads may be permitted only when fully screened from the river by topography.

Proposed Classification for Newly Added Segment

Recreation River Area

From the confluence of Parrish Creek with the main stem of the John Day River at approximately river mile 157 to the confluence of Service Creek with the main stem of the John Day River at approximately river mile 170, the river is classified as *Recreation River Area*. This 13 mile segment of the John Day River runs parallel to Oregon State Highway 19. Along most of this segment the highway can be seen from the river. The management goal for this segment is to ensure that the view of any new developments is unobtrusive as seen from the river.

Proposed Land Management Rule

This Recreational River Area shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040 (1)(c)(B). In addition to these standards, all new development in resource zones (i.e. farm and forest related dwellings) shall comply with Wheeler County land use regulations.

New structures and associated improvements (except as provided under OAR 736-40-030 (5)) shall be partially screened with native vegetation and/or existing topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if native vegetation can be established to provide partial screening of the proposed structure or improvement within a reasonable time (4-5 years). The condition of "partial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to partially obscure (at least 30%) the viewed improvement or structure, or allow a partially filtered view (at least 30% filtering) of the proposed structure or improvement.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation can be established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the altered improvement site.

New roads constructed for agricultural use, mining or residential use shall be moderately screened with vegetation and/or topography. If inadequate topography or vegetative screening exists, the road may be permitted if native vegetation can be established to provide moderate screening of the road within a reasonable time, (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to allow moderately filtered view (at least 50% filtering) of the road.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-35 and the above rule are more restrictive than the Wheeler County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

Proposed Land Management Recommendations

1. The Bureau of Land Management will provide the Oregon State Parks & Recreation Department draft plans, environmental assessments or environmental impact statements on activities that may affect the lower John Day state scenic waterway.
2. The State Parks Department shall seek the cooperation of all local, state, federal, and tribal agencies in meeting the objectives of this program and complying with the State Scenic Waterways Act and State Parks Commission rules.
3. Oregon Parks and Recreation Department and the BLM should provide for and post standardized, well designed, boundary signs distinguishing private lands from public lands where requested and where trespass has been identified as a continual problem.
4. When OPRD rehabilitates or expands the J.S. Burris State Park or the Clarno River Access site, these improvements will be done consistent with BLM river plan objectives and to complement other river recreation sites.

Proposed Scenic Waterway Program for the John Day River, North Fork

Proposed Classifications

The State Parks and Recreation Department proposes to apply two classifications to the North Fork of the John Day River Scenic Waterway.

Accessible Natural River Areas

1. From the west boundary of the North Fork John Day Wilderness in the Umatilla National Forest at approximately river mile 76 to the State Highway 395 Bridge crossing, the river is classified as an Accessible Natural River Area.

2. From the confluence of Camas Creek with the North Fork of the John Day River at approximately river mile 57 to river mile 20.2 approximately two and one-half miles north of the town of Monument, the river is classified as *Accessible Natural River Area*.

Intermittently visible from both of these river segments are parallel, primitive roads high on the river canyon slopes. Harvesting timber and cattle grazing are normal and continuing activities on private lands along these segments and their visual impact, for the most part, has been minimal. Dwellings and other structures associated with ranches and primitive campgrounds in the Umatilla National Forest are lightly distributed, making the overall impression primitive and isolated. The management goal is to maintain the primitive character of the landscape.

Proposed Land Management Rule

These Accessible Natural River Areas shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040(1)(e)(B). In addition to these standards, all new development in resource zones (i.e. farm and forest related dwellings) shall comply with Grant or Umatilla County land use regulations.

New structures and associated improvements shall be totally screened from view from the river by existing vegetation and/or topography except as provided under OAR 736-40-030 (5) and except minimal facilities needed for public outdoor recreation or resource protection.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if native vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the altered improvement site.

Visible tree harvest may be allowed provided that: 1) the operation complies with the relevant Forest Practices Act rules, 2) harvest methods with low visual impact are used and 3) the effect of the harvest is to enhance the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density and occurrence patterns).

New roads shall be permitted only when fully screened from the river by topography and/or existing vegetation.

Existing visible roads may be upgraded when those roads are moderately screened or moderate screening is established. No side cast which would be visible from the river is permitted. Excess material shall be hauled to locations out of sight from the river. If inadequate screening exists,

upgrading the road may be permitted if native vegetation is established to provide moderate screening of the road within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to allow a moderately filtered view (at least 50% filtering) of the road.

Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance shall be kept to a minimum.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than Grant County's or Umatilla County's Land Use and Development Ordinance, the above Administrative Rules shall apply.

Proposed Classification

Recreational River Area

From State Highway 395 Bridge Crossing to the confluence of Camas Creek with the North Fork of the John Day, the river is classified as a *Recreational River Area*. Oregon State Highway 395 runs parallel to this segment of the North Fork of the John Day River for approximately three miles. Along most of this segment length the highway can be seen from the river. The management goal for this segment is to ensure that the view of any new developments is unobtrusive as seen from the river.

Proposed Land Management Rule

This Recreational River Area shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040 (1)(c)(B). In addition to these standards, all new development in resource zones (i.e. farm and forest related dwellings) shall comply with Umatilla County or Grant County land use regulations.

New structures and associated improvements (except as provided under OAR 736-40-030 (5)) shall be partially screened with native vegetation and/or existing topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if native vegetation is established to provide partial screening of the proposed structure or improvement within a reasonable time (4-5 years). The condition of "partial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation to partially obscure (at least 30%) the viewed improvement or structure, or allow a partially filtered view (at least 30% filtering) of the proposed structure or improvement.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar

forms of development may be permitted if vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the altered improvement site.

Visible tree harvest may be allowed provided that: 1) the operation complies with the relevant Forest Practices Act rules, 2) harvest methods with low visual impact are used and 3) the effect of the harvest is to enhance the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density and occurrence patterns).

New roads constructed for agricultural use, mining or residential use shall be moderately screened with vegetation and/or topography. If inadequate topography or vegetative screening exists, the road may be permitted if native vegetation is established to provide moderate screening of the road within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to allow moderately filtered view (at least 50% filtering) of the road.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-35 and the above rule are more restrictive than the Grant County and Umatilla County Land Use and Development Ordinances, the above Oregon Administrative Rules shall apply.

Proposed Land Management Recommendations

1. The Bureau of Land Management and Umatilla National Forest will provide the Oregon State Parks & Recreation Department (OPRD) draft plans, environmental assessments or environmental impact statements on activities that may affect the Lower John Day State Scenic Waterway.
2. The State Parks Department shall seek the cooperation of all local, state, federal, and tribal agencies in meeting the objectives of this program and complying with the State Scenic Waterway Act and State Parks Commission rules.
3. Oregon Parks and Recreation Department and the BLM should provide for and post standardized, well designed, boundary signs distinguishing private lands from public lands where requested and where trespass has been identified as a continual problem.
4. OPRD shall work with the Water Resources Department (WRD) local citizens, appropriate tribal governments, Umatilla National Forest, ODFW, NW Power Planning Council and the BLM to pursue the WRD North Fork John Day Stream Restoration Program goals, objectives, and implementing measures (especially those affecting esthetics, recreation and river access at Dale) to have been approved Summer of 1992 by Oregon Water Resources Commission.

Proposed Scenic Waterway Program for the John Day River, Middle Fork

Proposed Classification

The State Parks and Recreation Department proposes to apply two classifications to the Middle Fork of the John Day River Scenic Waterway.

Scenic River Area

From the Crawford Creek Bridge crossing at approximately river mile 71 to the east boundary of Section 11, Township 8 S, Range 30 E, at approximately river mile 11 of the Middle Fork of the John Day River is classified *Scenic River Area*. This segment of the Middle Fork is approximately 60 miles long mainly fronted by private lands. This river segment runs parallel to a road that is paved, for the most part not seen from the river, lightly travelled and adjoins thinly distributed ranches and rural residential dwellings. The management goal is to allow continuation of existing farm, forest, rural residential and recreation uses while protecting the scenic character of the area.

Proposed Land Management Rule

This Scenic River Area shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040 (1)(b)(B). In addition to these standards, all new development in resource zones (i.e. farm and forest related dwellings) shall comply with Grant County land use regulations.

New structures and associated improvements (except as provided under OAR 736-40-030 (5)) shall be moderately screened with native vegetation and/or existing topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if native vegetation is established to provide moderate screening of the proposed structure or improvement within a reasonable time (4-5 years). The condition of "moderate August 12, 1993 screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to moderately obscure (at least 50%) the viewed structure or improvement, or allow a moderately filtered view (at least 50% filtering) of the proposed structure or improvement.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if native vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the altered improvement site.

Visible tree harvest may be allowed provided that: 1) the operation complies with the relevant Forest Practices Act rules, 2) harvest methods with low visual impact are used and 3) the effect of the harvest enhances the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density and occurrence patterns).

New roads may be permitted only when fully screened from the river by topography and/or existing vegetation.

Existing roads may be upgraded when those roads are moderately screened from view from the river by topography and/or existing vegetation. No side cast which would be visible from the river is permitted. Excess material shall be hauled to locations out of sight from the river. If inadequate screening exists, the road may be permitted if native vegetation is established to provide moderate screening of the road within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to allow a moderately filtered view (at least 50% filtering) of the road.

Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance should be kept to a minimum.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the Grant County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

Proposed Classification

Natural River Area

From the east boundary of Section 11, Township 8 S, Range 30 E, at approximately river mile 11 of the Middle Fork of the John Day River to its confluence with the North Fork of the John Day River, this segment is classified natural river area. This eleven mile segment of the river is inaccessible by road and is remotely located between steep walled canyons where very little sign of any structures or settlement exists. The management goal is to preserve and protect the primitive undeveloped character of the area.

Proposed Land Management Rule

This Natural River Area shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040(1)(a)(C). In addition to these standards, all new development in resource zones (i.e. farm and forest related dwellings) shall comply with Grant County land use regulations.

New structures and associated improvements shall be totally obscured from view from the river except as provided under OAR 736-40-030 (5) and except those minimal facilities needed for public outdoor recreation or resource protection.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from the river by topography and/or existing vegetation. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the affected area.

V. Oregon Scenic Waterways Program and its Application to the John Day River

Visible tree harvest may be allowed provided that: 1) the operation complies with the relevant Forest Practices Act rules, 2) harvest methods with low visual impact are used and 3) the effect of the harvest enhances the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density and occurrence patterns).

New roads may be permitted only when fully screened from the river by topography and/or existing vegetation.

Any existing roads, visible from the river, shall not be extended, realigned, or improved substantially. When an existing road is regraded, no side cast which would be visible from the river is permitted. Excess material must be hauled to locations out of sight from the river.

Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance shall be kept to a minimum.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the Grant County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

Proposed Land Management Recommendations

1. The Malheur National Forest will provide the Oregon State Parks & Recreation Department (OPRD) draft plans, environmental assessments or environmental impact statements on activities that may affect land or waters in the Middle John Day State Scenic Waterway.
2. The State Parks Department shall seek the cooperation of all local, state, federal, and tribal agencies in meeting the objectives of this program and complying with the State Scenic Waterway Act and State Parks Commission rules.
3. Oregon Parks and Recreation Department and the Malheur National Forest Service should provide for and post standardized, well designed, boundary signs distinguishing private lands from public lands where requested and where trespass has been identified as a continual problem in the State Scenic Waterway.
4. OPRD shall work with the Water Resources Department (WRD), local citizens, Malheur National Forest and the Nature Conservancy to pursue the WRD Middle Fork John Day Stream Restoration Program goals and objectives, and implementation measures (especially those affecting esthetics and recreation) approved May, 1991 by Oregon Water Resources Commission.

Proposed Scenic Waterway Program for the John Day River, South Fork

Proposed Classification

The State Parks and Recreation Department proposes to apply two classifications to the South Fork of the John Day River Scenic Waterway.

Scenic River Area:

From the Post-Paulina Road crossing to Ellingson Mill at the north boundary of section 29, of T 16 S, R 27 (approximately river mile 31) the River is classified Scenic River Area. This area is mainly undeveloped and natural in character with the exception of the lightly traveled road, some ranch dwellings and power lines from Post-Paulina Road to Ellingson Mill. The management goal is to allow continuation of existing ranch, forest and recreation uses while protecting the scenic character of the area.

Proposed Land Management Rule

This Scenic River Area shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040 (1)(b)(B). In addition to these standards, all new development in resource zones (i.e. farm and forest related dwellings) shall comply with Grant County land use regulations.

New structures and associated improvements (except as provided under OAR 736-40-030 (5)) shall be moderately screened with existing vegetation and/or topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if native vegetation is established to provide moderate screening of the proposed structure or improvement within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to moderately obscure (at least 50%) the viewed improvement or structure, or allow a moderately filtered view (at least 50% filtering) of the proposed structure or improvement.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the altered improvement site.

Visible tree harvest may be allowed provided that: 1) the operation complies with the relevant Forest Practices Act rules, 2) harvest methods with low visual impact are used and 3) the effect of the harvest enhances the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density and occurrence patterns).

New roads may be permitted only when fully screened from the river by topography and/or existing vegetation.

Existing roads may be upgraded when those roads are moderately screened from view from the river by topography and/or existing vegetation. No side cast which would be visible from the river is permitted. Excess material shall be hauled to locations out of sight from the river. If inadequate screening exists, the road may be permitted if native vegetation is established to provide moderate screening of the road within a reasonable period (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to allow a moderately filtered view (at least 50% filtering) of the road.

Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance should be kept to a minimum. Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the Grant County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

Proposed Classification

Accessible Natural River Area

From Ellingson Mill at the north boundary of section 29, of T 16 S, R 27 (approximately river mile 31) to north boundary of the Murderer's Creek Wildlife Area the east-west half section boundary of section 24, of T 13 S, R 26 E (approximately river mile 6) the river is classified Accessible Natural River Area. This 25 mile segment of the river is inaccessible by road and is remotely located between steep-walled canyons where very little sign of any structures or settlement exists. The management goal is to preserve and protect the primitive undeveloped character of the area.

Proposed Land Management Rule

This Accessible Natural River Area shall be administered consistent with the standards set by OAR 736-40-035 and OAR 736-40-040(1)(e)(B). In addition to these standards, all new development in resource zones (i.e. farm and forest related dwellings) shall comply with Grant County land use regulations.

All new structures and associated improvements shall be totally screened from view from the river by existing vegetation and/or topography except as provided under OAR 736-40-030 (5) and except minimal facilities needed for public outdoor recreation or resource protection.

New roads shall be permitted only when fully screened from the river by topography and/or existing vegetation.

New mining operations, except placer mining, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if native vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the altered improvement site.

Visible tree harvest may be allowed provided that: 1) the operation complies with the relevant Forest Practices Act rules, 2) harvest methods with low visual impact are used and 3) the effect of the harvest is to enhance the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density and occurrence patterns).

Existing visible roads may be upgraded when those roads are moderately screened or moderate screening is established. No side cast which would be visible from the river is permitted. Excess material shall be hauled to locations out of sight from the river. If inadequate screening exists, upgrading the road may be permitted if native vegetation is established to provide moderate screening of the road within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to allow a moderately filtered view (at least 50% filtering) of the road.

New roads may be permitted only when fully screened from the river by topography and/or existing vegetation.

Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance shall be kept to a minimum.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the Grant County Land Use and Development Ordinance, the above Administrative Rules shall apply.

Proposed Land Management Recommendations

1. The BLM and the Murderer's Creek Wildlife Refuge personnel provide the Oregon State Parks & Recreation Department (OPRD) draft plans, environmental assessments or environmental impact statements on activities that may affect land or waters in the South Fork, John Day State Scenic Waterway.
2. The State Parks Department shall seek the cooperation of all local, state, federal, and tribal agencies in meeting the objectives of this program and complying with the State Scenic Waterway Act and State Parks Commission rules.

V. Oregon Scenic Waterways Program and its Application to the John Day River

3. Oregon Parks and Recreation Department and the BLM should provide for and post standardized, well designed, boundary signs distinguishing private lands from public lands where requested and where trespass has been identified as a continual problem in the State Scenic Waterway.
4. OPRD shall work with the South Fork CRMP, and local citizens, to pursue the South Fork John Day Restoration Program goals, objectives, and implementation measures (especially those affecting esthetics and recreation) to be completed in the immediate future by Bureau of Reclamation.

ADDENDUM:

The following text belongs on page 247, immediately after line 8:

Any existing roads, visible from the river, shall not be extended, realigned, or improved substantially. When an existing road is regraded, no side cast visible from the river is permitted. Excess material must be hauled to locations out of sight from the river.

Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance shall be kept to a minimum.

Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape.

Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

VI. Implementation

BLM and ORPD Responsibilities and Priorities

Successful implementation of the John Day River Management Plan will require coordination and cooperation between many agencies, organizations and individuals. Each would make its decisions under applicable federal, state, local or tribal procedures which may offer either additional public comment or decision appeal rights.

I. BLM Responsibilities and Priorities (subject to approval under the National Environmental Policy Act procedures and 43 CFR 4.4 decision review procedures).

A. Protection and Enhancement of River Related Natural and Cultural Resources.

1. Protect and enhance the outstandingly remarkable resource values of the wild and scenic rivers of the John Day River System in coordination with OPRD.
2. Manage and where necessary, adjust livestock grazing on BLM land; construct necessary range developments.
3. Conduct cultural resources resurvey, increase surveillance and begin stabilization of cultural sites on BLM land as needed.
4. Conduct vegetation monitoring studies on BLM land.
5. Conduct seeding, planting and prescribed burning on BLM land.
6. Increase fire suppression capabilities.
7. Seek technical assistance from USFWS and ODFW regarding implications of proposed management actions on candidate of listed threatened or endangered species.

B. Development or Rehabilitation of Recreation Sites and Facilities

1. Close and rehabilitate certain undeveloped campsites on BLM land.
2. Coordinate the upgrading and construction of camping and day-use areas as well as roads, trails, parking areas, launching and landing sites, signs and other information and education facilities on BLM land.

C. Management of Recreation Use Levels and Commercial Activities

1. Jointly monitor recreation use levels with other affected agencies.
2. Administer commercial special recreation permit system for entire river system.

D. Public Safety, Services and Communications

1. Establish or continue law enforcement agreements between BLM and all affected countries.
2. Coordinate publication of maps and information and education brochures.
3. Coordinate establishment of a uniform communication network for managing agencies.

BLM will implement the actions described in Management Common to All Alternatives immediately upon release of the final plan.

Site specific implementation plans will be developed for each river segment where BLM has actions described in the final plan. Priority for implementation will be given to the designated Wild and Scenic segments. These plans will also describe monitoring. Monitoring will determine the degree to success achieved by the prescribed actions in protecting and enhancing river values and in achieving the management goals for each segment set by this plan.

September 12, 1993

State of Oregon and Local Governments Responsibilities and Priorities (subject to state-level rule making or local government ordinance adoption procedures).

A. Protection and Enhancement of River Related Natural and Cultural Resources

1. Protect and enhance the special attributes of the scenic waterways in the John Day River System in coordination with BLM.
2. Manage and, where necessary, adjust livestock grazing on state land. Construct necessary range developments (ODFW).
3. Conduct vegetative monitoring studies on state land (ODFW).
4. Conduct seeding and planting on state land (ODFW).
5. Conduct monitoring of fish and wildlife populations on entire river system (ODFW).
6. Coordinate survey, surveillance and stabilization of cultural resources on state land (OPRD).

B. Development or Rehabilitation of Recreation Sites and Facilities

1. Designate or close and rehabilitate vehicle routes and parking and pull-outs on state land (OPRD).
2. Designate and "harden" or close and rehabilitate undeveloped campsites on state land (OPRD, OFWD).
3. Coordinate the construction and upgrading of camping and day-use areas as well as roads, trails, parking areas, launching and landing sites, signs and other information and education facilities on state land (OPRD).

C. Management of Recreation Use Levels and Commercial Activities

1. Jointly monitor recreation use levels with other affected agencies (OMB, OPRD, ODFW).
2. Administer angling and hunting regulations (ODFW).
3. Administer joint agency boater allocation system, if one is implemented (OMB).
4. Administer boater pass fee, if one is implemented (OPRD).
5. Develop and implement a boat identification system (OMB).
6. Implement motorboat regulations (OMB).

D. Public Safety, Services and Communications

1. Develop and implement public information and education facilities and publications jointly with other affected agencies (OPRD, ODFW).

Cost Estimates

Estimated costs of construction, maintenance and acquisitions are shown on Tables 44 and 45.

Table 44: Estimated Costs for Construction and Land Acquisitions by Alternative (in thousands of dollars).

Construction Projects or Easements	Preferred Alt.	Alt. A	Alt. B	Alt. C	Alt. D
Segment 1					
McDonald Boat Launch Hay Cr. and	0	0	42	0	0
Access two miles	0	0	15	0	0
Interpretive area McDonald Ford	10	0	40	10	0
Private land acquisition at Rock Cr.	*24	0	24	24	0
River access trail at Hay Cr. and trailhead parking	45	0	45	35	0
Segment 2					
Acquire road easements:					
Butte Cr.	30	0	30	30	0
Thirty Mile	24	0	24	24	0
Pine Hollow	0	0	30	0	0
Sorefoot	0	0	10	0	0
Buckskin	0	0	20	0	0
Penny Spring	0	0	10	0	0
Segment 3					
Acquire easement to Juniper Island	25	0	25	25	0
Build new road to Juniper Island	0	0	40	0	0
Acquire access at Twickenham (access and 5 ac. land)	30	0	30	30	0
Clarno wildlife viewing area dev.	0	0	40	0	0
Maintenance for Burnt Ranch and Priest Hole	10	5	10	10	0
Burnt Ranch boat launch dev.	9	0	9	9	0
Priest Hole boat launch dev.	9	0	9	9	0
Segment 10					
Acquire 40 acre tract: T. 16 S., R. 27 E., Section 29, SE1/4SE1/4	25	0	25	25	0
Develop interpretive trail	0	0	20	0	0
Acquire 40 acre tracts: T. 14 S., R. 26 E., Section 12, SW1/4SW1/4; Section 13, NE1/4NE1/4	40	0	40	40	0
Two Information Kiosks: Scenic Byways, and Wild & Scenic River	20	0	54	20	0
Traffic control barriers at dispersed recreation site	40	0	40	40	0
Improve 22 miles of the South Fork John Day Road (4" lift of crushed rock)	400	0	400	400	0
Sub-totals	740	5	1041	740	9
Grand Total	1614	35	3216	1571	393

* All figures include WM costs.

Table 45: Estimated Development Costs for Camping and Day Use Areas by Alternative (in thousands of dollars).

Area Facility to be developed	Preferred Alt.	Alt. A	Alt. B	Alt. C	Alt. D
For All Segments	(246 sites)	(0 sites)	(328 sites)	(246 sites)	(164 sites)
Undeveloped Campsite at Average Cost of \$1,000 per site for site hardening and maintenance Preferred Alternative	246	0	328	246	164
Developed/Semi-Developed campsites and day use areas by segment:					
Segment 1					
McDonald Ford Campsites and Interpretive Site	53	0	279	53	0
Segment 2					
Butte Creek	0	0	110	0	0
Segment 3					
Juniper Island	44	5	44	44	5
Clarno Homestead	0	0	40	0	0
Burnt Ranch	100	5	289	100	5
Priest Hole	104	5	198	104	5
Twickenham	39	0	39	39	0
Segment 4					
MP 99	36	0	36	28	28
Segment 5	0	0	0	0	0
Segment 6					
Big Bend improvements	66	0	66	66	66
Lone Pine improvements	121	0	121	66	66
Segment 7					
Dale Site - assist USFS	0	0	0	0	0
Segment 8	0	0	0	0	0
Segment 9	0	0	0	0	0
Segment 10					
Site 1, Section 29	0	0	270	0	0
Site 2, Section 12	0	0	270	0	0
Segment 11	0	0	0	0	0
All Segments:					
Litter/Clean-up	15	5	15	15	15
Patrols/Law Enforcement	20	5	20	20	20
Brochures/Maps, Information and Education Boards, etc.	30	5	50	50	50
Motorized Boat Restrictions/Permits*	-	-	-	-	-
TOTALS	874	30	2175	831	424

*One of the most costly actions of this plan would be a permit/restriction use system and would be implemented when the need arises. This could possibly be phased in by segments and would be the same for all alternatives, except Alternative A.

BLM LIBRARY
 RS 150A BLDG. 50
 DENVER FEDERAL CENTER
 P.O. BOX 25047
 DENVER, CO 80225

Appendix A

Critical Environmental Elements Considered in This Plan

Element	Affected By Plan		Where Covered
	Yes	No	
Air Quality	X		IV.H.
Areas of Critical Environmental Concern		X	
Cultural Resources	X		II.B., IV.A.
Farm Lands	X		II.C.
Floodplains		X	
Native American Religious Concerns	X		II.C
Threatened or Endangered Species	X		II.B., II.B.
Wastes, Hazardous or Solid		X	
Water Quality	X		II.B., IV.A., IV.H.
Riparian Zones, Wetlands	X		II.B., IV.A., IV.H.
Wild and Scenic Rivers	X		I.A., I.A.
Wilderness	X		II.B.

Appendix A

Critical Elements and Elements Contributing to Fish Production

Element	Contribution to Fish Production	Management Action
Water Quality	Essential for fish health and growth	Monitor and maintain optimal levels
Food Availability	Directly impacts fish growth and survival	Ensure adequate food sources
Shade and Cover	Provides refuge from predators and stress	Maintain riparian vegetation
Bank Stability	Prevents erosion and maintains habitat structure	Implement erosion control measures
Channel Morphology	Influences water flow and sediment transport	Manage channel width and depth
Substrate Composition	Affects spawning and habitat quality	Monitor and manage sediment levels
Vegetation	Provides habitat and improves water quality	Plant native species and remove invasives
Wildlife Interactions	Impacts fish survival and population dynamics	Monitor and manage predator populations
Human Activities	Can degrade habitat and water quality	Regulate land use and recreational activities
Climate Change	Alters water temperature and flow patterns	Implement adaptive management strategies
Water Temperature	Critical for fish metabolism and reproduction	Monitor and manage temperature fluctuations
Flow Regime	Influences fish behavior and habitat use	Maintain natural flow variability
Sediment Load	Can smother spawning grounds and reduce oxygen	Reduce sediment input from sources
Water Chemistry	Affects fish health and ecosystem balance	Monitor and manage chemical inputs
Biological Interactions	Influences fish population dynamics	Monitor and manage species interactions
Recreation	Can impact habitat and water quality	Regulate recreational activities
Land Use	Impacts water quality and habitat structure	Implement land use planning
Water Quality	Essential for fish health and growth	Monitor and maintain optimal levels
Food Availability	Directly impacts fish growth and survival	Ensure adequate food sources
Shade and Cover	Provides refuge from predators and stress	Maintain riparian vegetation
Bank Stability	Prevents erosion and maintains habitat structure	Implement erosion control measures
Channel Morphology	Influences water flow and sediment transport	Manage channel width and depth
Substrate Composition	Affects spawning and habitat quality	Monitor and manage sediment levels
Vegetation	Provides habitat and improves water quality	Plant native species and remove invasives
Wildlife Interactions	Impacts fish survival and population dynamics	Monitor and manage predator populations
Human Activities	Can degrade habitat and water quality	Regulate land use and recreational activities
Climate Change	Alters water temperature and flow patterns	Implement adaptive management strategies
Water Temperature	Critical for fish metabolism and reproduction	Monitor and manage temperature fluctuations
Flow Regime	Influences fish behavior and habitat use	Maintain natural flow variability
Sediment Load	Can smother spawning grounds and reduce oxygen	Reduce sediment input from sources
Water Chemistry	Affects fish health and ecosystem balance	Monitor and manage chemical inputs
Biological Interactions	Influences fish population dynamics	Monitor and manage species interactions
Recreation	Can impact habitat and water quality	Regulate recreational activities
Land Use	Impacts water quality and habitat structure	Implement land use planning

Appendix B

Glossary

Access - A passage allowing recreationists to reach the areas in which they wish to recreate.

Access Easement - A legal right to cross the land granted to the public by a landowner.

Administrative Rules - Regulations established by State agency boards and commissions in accordance with Oregon Revised Statutes.

Allocation - The assignment of recreational use or access to users through management methods after it is determined that demand for the resource exceeds acceptable limits or established standards.

Allotment - An area of land where one or more livestock operators graze their livestock.

Allotment Classifications - I (Improve) - Range condition unsatisfactory, high potential, producing at low to moderate level, resource-use conflicts present, positive economic opportunity, management unsatisfactory. M (Maintain) - Range condition satisfactory moderate to high potential, producing near potential or upward trend, no serious resource-use conflicts, possible economic opportunity, management satisfactory. C (Custodial) - Range condition not a factor, low potential, producing near potential, limited resource-use conflicts, no economic opportunity, management satisfactory or no options.

Animal Unit Month (AUM) - A standardized measurement of the amount of forage necessary to sustain a cow and calf for one month.

Aquatic - Living or growing in or on the water.

Archaeological Site - Geographic locale containing structures, artifacts, material remains and/or other evidence of past human activity.

BLM Lands - Any land and interest in land managed by the United States Government and administered by the Secretary of the Interior through the Bureau of Land Management. (Also, public lands.)

Boat - Watercraft used or capable of being used as a means of transportation on the water, but does not include aircraft equipped to land on water, boathouses, floating homes, air mattresses, beach and water toys or single inner tubes.

Boater - Any person who utilizes a floating craft or device for transportation on the surface of the river.

Boater Day - Use by a boater of any river segment for all or part of a day.

Campground - One or more developed campsites in a specific area.

Camping - Outdoor living for recreation.

Campsite - Individual unit for camping.

Campsite Rehabilitation - Measures taken to restore damaged campsites and to prevent further damage to natural resources, such as planting grass and shrubs.

Client - A paying member of a guided or outfitted group.

Cultural Resources - Remains of human (historical and archaeological) activity, occupation, or endeavor, reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture and natural features that were of importance in past human events. Cultural resources consist of: (1) physical remains; (2) areas where significant human events occurred, even though evidence of the events no longer remains; and (3) the environment immediately surrounding the actual resource.

Degraded Site - Any vegetation area which is in early seral status or in declining ecological condition.

Developed Campground - Accessible by motor vehicle and contains improvements for camper comfort and sanitary facilities such as toilets, drinking water, tables and trash receptacles.

Diversity - A measure of the variety of species and habitats in an area that takes into account the relative abundance of each species or habitat.

Environmental Impact Statement (EIS) - A formal document to be filed with the Environmental Protection Agency that considers significant environmental impacts expected from implementation of Federal actions.

Erosion - Detachment and movement of soil or rock fragments by water, wind, ice or gravity.

Evapotranspiration - Loss of water by evaporation from the soil and transpiration from plants.

Exclosure - An area fenced to exclude animals (primarily livestock).

Forage - All browse and herbaceous plants that are available to grazing animals, including wildlife and domestic livestock.

Ground Cover - Grasses or other plants that keep soil from being blown or washed away.

Group Size - The number of people in a boating or camping party including guides and any support personnel.

Guide - A person who provides services by leading one or more other persons in outdoor recreation activities for a fee.

Guide Permit - A license to carry out the activities of a guide.

Habitat - The type of environment in which certain plants or animals live.

Historic Site - Locals used by immigrants from the 1820s to 1930s.

Impact - A change in the environment caused by the activities of humans.

Instream Water Right - A right to the use of water which remains in the stream, such as for fish, recreation or pollution abatement.

Issue - A subject or question of widespread public discussion or interest regarding management of a geographic area which has been identified through public participation.

Landing Site - The riverbank location where boats are taken from the river.

Locatable Minerals - The metallic minerals subject to development specified in the General Mining Law of 1872. Within the planning area this includes gold, mercury and bentonite.

Management Objectives - Parameters or goals to be used as standards to measure the success of the management plan.

Monitoring - The orderly collection of data to evaluate the effects or changes that result from management actions.

Motorboat - Any boat propelled in whole or in part by machinery, including boats temporarily equipped with detachable motors.

Multiple Use - The harmonious use of land or water resources for more than one purpose.

National Register of Historic Places (NRHP) - The official list, established by the Historic Preservation Act of 1966, of the nation's cultural resources worthy of preservation.

National Wild and Scenic Rivers System - A system of Congressionally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural and other values and are preserved in a free-flowing condition. The system is of three types: (1) Recreation - rivers or section of rivers readily accessible by road or railroad that may have some development along their shorelines and that may have undergone some impoundment or diversion in the past; (2) Scenic - rivers or sections of rivers free of impoundments, with shorelines or watersheds still largely undeveloped but accessible in places by roads; and (3) Wild - rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted.

Native Species - Plants or animals that are indigenous to an area.

Non-Commercial - Activities in which there is a bona fide sharing of the cost of the activity between all participants.

No-Trace Camping - The art of camping without leaving signs of use.

Noxious Weed - A plant specified by law as being especially undesirable, troublesome and difficult to control.

Outfitter - A person who for compensation or other gain, provides equipment, supplies or materials for the conduct of outdoor recreational activities.

Paleontological Resource - Remnants of life from past geological ages as seen in fossil plants and animals.

Permittee - One who holds a license to use public lands or waters for financial gain.

Permit System - A method of allotting use of a public resource through issuance of permits.

Plan Objectives - Guiding statements or goals that present the purposes and overall intent of the planning effort.

Prehistoric - The period of time before written records.

Primitive Campsite - Contains no improvements for camper comfort or sanitation.

Right-of-way - A permit or easement which authorizes a specific use of a specific area of land.

Riparian Area - The land adjacent to water, where water, soil and vegetation interact to form a unique microclimate.

Riverine Terrace - A flat, usually narrow stretch of ground between the river bank and the uplands.

Sanitation Facilities - Installations of buildings or other structures which ease the disposition or collection of human waste.

Sediment - Soil, rock particles and organic or other debris carried from one place to another by wind, water or gravity.

State Lands - Lands managed by an Oregon government agency.

Stewardship - The exercise of responsible care of land, water or other natural resources, or recreational resources such as a campsite.

Treaty Rights - Legal rights of the Confederated Tribes of the Warm Springs Indians, established in their treaty with the United States Government in 1855.

Turbidity - A measure of water clarity.

Undeveloped Campsite - Contains few improvements for camper comfort or sanitation, usually accessible only by boat.

Upland - All rangelands other than riparian or wetland areas.

Visitor Use Day -

Visual Resource Management - A process used to manage the quality of the visual environment and to reduce the visual impact of development activities.

Water Quality - The chemical, physical and biological characteristics of water with respect to its suitability for a particular use.

Appendix C

List of Preparers

John Day River ad hoc Study Group:

This group has been operating for over three years. During this time, many people have contributed their valuable time and expertise to the development of this plan. BLM is deeply grateful to all past and present members. Present members of the group are as follows:

Clarence Bare, Farmer
Bob Boyenton, Rancher
Kevin Campbell, Grant County Judge
Errol Claire, ODFW
Don James, Retired, USFS
Craig Lacy, Outfitter and Guide
Gary Miniszewski, OPRD
Jim Morris, NPS
Wayne Shuyler, OMB
Norm Sipple, NW Rafters Association

Agency Contributors:

Dan Wood, BLM, Team Leader
Lyle Andrews, BLM
Harry Cosgriffe, BLM
Brian Cunningham, BLM
Dennis Davis, BLM
Corina Defferding, BLM
Tom Farnam, BLM
Scott Goodman, BLM
Mike Gray, ODFW
Ron Halvorson, BLM
Jim Hancock, BLM
Brad Keller, BLM
Steve Lent, BLM
Max Linn, BLM
Connie McMillin, BLM
SuZan Meiners, BLM

Gary Miniszewski, OPRD
Shaaron Netherton, BLM
Roy Pearl, BLM
Jack Remington, BLM
Chester Schmidt, BLM
James Sippel, BLM
Peggy Sommers, BLM
Eric Stone, BLM
Larry Thomas, BLM
Ken White, BLM
Joe Wichman, BLM
Syd Williamson, BLM
Julie Yocom, BLM
Dave Young, BLM
Don Zalunardo, BLM
John Zancanella, BLM

Appendix C

List of Participants

John Day River at Astoria, Oregon

The group has been working on the John Day River at Astoria, Oregon. The group has been working on the John Day River at Astoria, Oregon. The group has been working on the John Day River at Astoria, Oregon.

- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon

John Day River at Astoria, Oregon

- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon

- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon
- John Day River at Astoria, Oregon

Appendix D

References

1. Draft Two Rivers Resource Management Plan Environmental Impact Statement, BLM, 1985.
2. Final Proposed Two Rivers Resource Management Plan Environmental Impact Statement, BLM, September, 1985.
3. Two Rivers Resource Management Plan Record of Decision Rangeland Program Summary, BLM, June, 1986.
4. Two Rivers Resource Management Plan Proposed Land Use Alternatives, BLM, August, 1984.
5. John Day Resource Management Plan Proposed Land Use Alternatives, BLM, 1983.
6. John Day Resource Management Plan Record of Decision Rangeland Program Summary, BLM, August, 1985.
7. Proposed John Day Resource Management Plan and Final Environmental Impact Statement, BLM, November, 1984.
8. Draft John Day Resource Management Plan Environmental Impact Statement, BLM, June, 1984.
9. John Day River Basin Report, WRD, November, 1986.
10. Anadromous Fish Habitat Management on Public Lands A Strategy for the Future, BLM, January, 1988.
11. Reiser, D.W. and T.C. Bjornn, Influence of Forest and Rangeland Management on Anadromous Fish Habitat in Western North America Habitat Requirements of Anadromous Salmonids General Technical Report PNW-96, USFS, October, 1979.
12. Salmon and Steelhead Production Plan Integrated System Plan, Columbia Basin Fish and Wildlife Authority, NPPC, June, 1991.
13. Final Draft Stream Restoration Program for Upper South Fork of the John Day River, B.Rec., December, 1992.
14. Anadromous Fish Habitat Management Plan for the Columbia and Snake River Basins Prepared for the Pacific Northwest Salmon Summit, BLM, May, 1991.
15. Columbia River Basin Fish and Wildlife Program, NPPC, 1987.
16. Columbia River Basin Anadromous Fish Habitat Management Policy and Implementation Guide, USFS, January, 1991.

17. Characteristics of Successful Riparian Restoration Projects in the Pacific Northwest, EPA, August, 1991.
18. Riparian-Wetland Initiative for the 1990's, BLM, September, 1991.
19. Upper John Day River Basin Master Water Plan Working Paper, B.Rec., September, 1990.
20. Stock Assessment of Columbia River Anadromous Salmonids, Vol. I, Chinook Salmon, ODFW, WDF, WDG, IDFG, BPA, November, 1984.
21. Stock Assessment of Columbia River Anadromous Salmonids, Vol. III, Steelhead Trout, ODFW, WDF, WDG, IDFG, BPA, November, 1984.
22. Wild Chinook Salmon in the John Day River System, BPA, ODFW, February, 1986.
23. Shelby Bo, T.C. Brown and J.G. Taylor Streamflow and Recreation. USFS, General Technical Report RM-209, January, 1992.
24. 1991 Traffic Volume Tables, ODOT, June, 1992.
25. John Day River Final Wild and Scenic River Study, NPS, September, 1979.
26. John Day River Basin Recommended Salmon and Steelhead Habitat Improvement Measures, Confederated Tribes of the Umatilla Indian Reservation (BPA), January, 1984.
27. Final Lower Deschutes River Management Plan and Environmental Impact Statement, BLM, January, 1993.
28. County Comprehensive Plans: Sherman, Gilliam, Wheeler, Wasco, Jefferson, Grant, Umatilla.
29. Garren, John. Oregon River Tours, 1979.
30. Oregon Statewide Assessment of Nonpoint Sources of Water Pollution. DEQ, August, 1988.
31. South Fork of the John Day Wild and Scenic River Resource Assessment, BLM, June, 1991.
32. John Day Basin Aquatic Habitat Management Plan, BLM Burns District, April, 1985.
33. Northwest Area Noxious Weed Control Program EIS, BLM, December, 1985.
34. BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review, November, 1987, release 8/36.
35. Draft John Day River Scenic Waterway Recreation Assessment, WRD, July, 1990.
36. Draft John Day River Scenic Waterway Flow Assessment, WRD, November, 1990.

37. High Desert River News, BLM, April, 1992.
38. Campbell, Arthur, John Day River Draft and Historical Guide, _ (date).
39. Farmer, Judith A., Daniel B. Karnes, G. Thomas Babich, Thompson P. Porterfield and Kenneth L. Holmes, An Historical Atlas of Early Oregon, Portland: Historical Cartographic Publications, 1973.
40. Dumond, Don E., and Rick Minor, Archeology in the John Day Reservoir: The Wildcat Canyon Site, 35-GM-9, University of Oregon Anthropological Papers 30, 1983.
41. Schalk, Randall F. Archeology of the Morris Site (35-GM-91) on the John Day River, Gilliam County, Oregon, Prepared by the Office of Public Archeology, University of Washington, for the U.S. Army Corps of Engineers, Portland District, 1987.
42. Polk, Michael R. Cultural Resource Inventory of the John Day River Canyon, BLM, Prineville District, 1976.
43. Ray, Verne F., George P. Murdock, Beatrice Blyth, Orner Stewart, Jack Harris, E.A. Hoebel and D. Shimkin, Tribal Distribution in Eastern Oregon and Adjacent Regions, American Anthropologist 40: 384-415, 1938.
44. Gannon, Brian L., Preliminary Report on the Archeology of Cove Creek - 2 (35WH7), Wheeler County, Oregon, Manuscript on File at the Museum of Anthropology, University of Oregon, Eugene, 1968.
45. Gannon, Brian L., Preliminary Report on an Archeology Site in the Clarno Basin of North-Central Oregon, 35WH7 (Cove Creek-2), Manuscript on file at the Museum of Anthropology, University of Oregon, Eugene, 1970.
46. Gannon, Brian L., Archeological Research on 35WH21 (Jones Canyon-2): Preliminary Report. Manuscript on File at the Oregon Museum of Science and Industry, Portland, 1972.
47. Stewart, Omer C., The Northern Paiute Bands, University of California Anthropological Records 2(3), Borkkeley, 1939.
48. Cressman, Luther S., Petroglyphs of Oregon, University of Oregon Monographs, Studies in Anthroplgy 2, 1937.
49. Young, David K., BLM Staff Report, Prineville District, 1991.
50. Claire, Errol, Personal Communication, BLM Staff Report, 1991.
51. Hanson, C. Bruce and Garrwood A. Allen, Inventory of Paleontological Resources of the John Day River Valley between Kimberly and Picture Gorge, Grant and Wheeler Counties, Oregon, November, 1987.

52. Endzweig, Pamela, Canyons and Crests: An Archeological Survey of the Pine Creek Basin, North-Central Oregon. Oregon State Museum of Anthropology, University of Oregon, OSMA Report 92-2, 1992.
53. Finley, William L. The Beaver - Conserver of Soil and Water, Second North American Wildlife Conference, 1937.
54. BLM Interium Management Policy and Guidelines for Lands Under Wilderness Review, BLM, November 10, 1987, release 8-36. September 12, 1993

Appendix E

Acronyms

ASCS	Agricultural Stabilization and Conservation Service (USDA)
AUM	Animal Unit Month
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
CBFWA	Columbia Basin Fish and Wildlife Authority
cfs	cubic feet per second
CRIFC	Columbia River Intertribal Fish Commission
CRMP	Coordinated Resource Management Plan
CTUR	Confederated Tribes of the Umatilla Reservation
CTWSR	Confederated Tribes of the Warm Springs Reservation
DEIS	Draft Environmental Impact Statement
DEQ	Department of Environmental Quality
DLCD	Department of Land Conservation and Development
DSL	Division of State Lands
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
FLPMA	Federal Land Policy and Management Act of 1976
JDBC	John Day Basin Council
LCDC	Land Conservation and Development Commission

MMBF	Million Board Feet
MOU	Memorandum of Understanding
NA	Not Available
NEPA	National Environmental Protection Act
NMFS	National Marine Fisheries Service
NPPC	Northwest Power Planning Council
NPS	National Park Service
NWSRS	National Wild and Scenic River System
NRHP	National Register of Historic Places
OAR	Oregon Administrative Rules
ODA	Oregon Department of Agriculture
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OEDD	Oregon Economic Development Department
ODOT	Oregon Department of Transportation
ODSL	Oregon Division of State Lands
OFPA	Oregon Forest Practices Act
OMB	Oregon Marine Board
OPRC	Oregon Parks and Recreation Commission
OPRD	Oregon Parks and Recreation Department
OSLB	Oregon State Land Board
OWRC	Oregon Water Resources Commission
OWRD	Oregon Water Resources Department

RM	River Mile
RMP	Resource Management Plan
SCS	Soil Conservation Service
SHPO	State Historical Preservation Office
SWCD	Soil and Water Conservation District
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WSA	Wilderness Study Area
WSRA	Wild and Scenic Rivers Act

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

VER'S CARD

6 P75 1993 c.2
au of Land
t. Prineville
Day River
Plan and

DATE
RETURNED

OFFICE

(Continued on reverse)

GB 1225 .06 P75 1993 c.2
U. S. Bureau of Land
Management. Prineville
Draft John Day River
Management Plan and

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PRINEVILLE DISTRICT OFFICE**

185 E. 4th Street
Prineville, Oregon 97754

**OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300**

**FORWARDING AND ADDRESS
CORRECTION REQUESTED**

**FIRST CLASS MAIL
POSTAGE & FEES PAID
Bureau of Land Management
Permit No. G-76**